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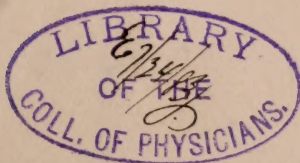
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LANDON B. EDWARDS, M. D.,

EDITOR AND PROPRIETOR.

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Original Communications.

ART. I.—**Woorara: Its Medical Properties and Availability for the Treatment of Disease.** By B. A. WATSON, M. D., Surgeon to Jersey City Charity and St. Francis Hospitals; Jersey City, N. J.

The availability of any remedial agent for the cure of disease must depend primarily on the physiological action of the drug, and, secondarily, on its judicious administration; whilst our knowledge of the action of medicine upon the sound organism of man and the lower animals can only be gained by experimentation and careful observation, which form an indispensable key to their curative operations in morbid conditions. The marked physiological action of woorara clearly indicates the existence of a power which, if properly applied, may be advantageously employed in the treatment of disease; and this, with the additional fact that in all our authoritative works on *Materia Medica* there is no mention made of this drug, or else it is classed with the *non-official*, now prompt me to call the attention of the medical profession to it. It therefore becomes important at this stage of our inquiry, to direct attention to the opinions expressed in regard to the physiological action of this drug by various investigators. The conclusions reached by Virchow and Münter, after the performance of various experiments, are expressed in the following:*

* *American Journal Medical Sciences*, Vol. xxxviii, p. 22.

“1. That the woorara, even after having been kept dry for five years, is still intensely poisonous.

2. That the physiological action of the woorara is in harmony with the chemical analysis which denies the presence of strychnia.

3. That woorara therefore does not belong to the class of tetanic poisons, but, like opium, induces stupor; and although it causes slight convulsive actions in cats, there is, nevertheless, neither tetanus nor trismus.

4. That it induces paralysis of the voluntary muscles, with, at the same time, long-continued action of the involuntary muscles (heart, intestines).

5. That woorara does not appear to produce death by absorption from the external surface of the body, but only when it is absorbed through a solution in the continuity of the animal tissues.

6. That in poisoning by woorara, coagulation of the fibrin of the blood ensues in the same manner as though the animal is killed by mechanical means; and that death takes place not so much from any direct result of the poison, but indirectly by its causing the cessation of the respiratory process.”

Bernard, having carefully studied the physiological action of woorara, expresses his views in the following language:*

“1st. That all reflex movements cease a few minutes after poisoning, the heart continuing to beat for a considerable time.

2d. That woorara is not absorbed from the mucous membrane of the stomach during digestion, or from the bladder, or from the conjunctiva of mammals, but it is readily taken up from the pulmonary and rectal mucous membranes of these animals. When introduced into the œsophagus or gizzard of birds, it is speedily fatal. Applied to the dry skin of frogs, it acts slowly but surely. In contact with the wet skin of these animals, it is not absorbed.

3rd. Woorara abolishes the function of the motor nerves, but does not affect that of the sensory nerves. Muscular irritability is rather augmented than diminished.

4th. That woorara kills the nerves from the periphery to the centre, acting in this respect conversely to strychnia.

* *Ibid*, p. 24.

5th. That it causes death by arresting the process of respiration, thus inducing asphyxia."

The conclusions reached by Virchow and Münter are essentially the same as those of Bernard; and it may be further added that the researches made by other students in this field have not disturbed the foundation on which they rest.

It is only just, in this connection, to call the attention of the reader to the experiments performed, and the conclusions reached by Drs. William A. Hammond and S. Weir Mitchell, who have published the results of their labors in the *American Journal of the Medical Sciences*, July, 1859. This elaborate paper is entitled: "Experimental Researches Relative to Corroval and Vao—Two New Varieties of Woorara, the South American Arrow Poison." The conclusions expressed in regard to the physiological action of the drugs examined by these eminent students are so entirely antagonistic to all previous and subsequent observations on woorara, that it is absolutely impossible to understand or explain exactly what they observed and recorded, unless we suppose that they experimented with an entirely different substance. The title of their paper leads us to conclude that they were fully aware that the drugs with which they experimented might be essentially different from that substance commonly called woorara; and the physiological results obtained in their experiments confirm us in the opinion that corroval and vao are questionably regarded even as varieties of woorara.

The marked difference in the physiological action of these drugs on the heart has been well expressed by Hammond and Mitchell, who say:* "The woorara hitherto used by experimenters was found, as we have already seen, to exercise little or no direct influence on the heart. This organ continued to beat in all animals for a considerable period, and, even after it had entirely stopped, it could be made to resume its actions by artificial respiration. The action of the corroval is in this respect directly antagonistic, as will be perceived from the following experiment." A more thorough understanding of their views in regard to the action of corroval and vao is found in the following conclusions:†

* *Ibid*, p. 28. † *Ibid*, p. 59.

“The vao poison closely resembles corroval in its physical, chemical and physiological reactions. The alkaloids extracted from the two poisons produce in animals of equal size effects which cannot be distinguished. We, therefore, are inclined to consider vao as merely a weaker variety of corroval, and to conclude that the apparent difference in the effects produced by the original extracts is due to a difference in their strength.”

In reference to the physiological action of this drug, they conclude as follows:*

“The first effect of vao is to increase the force of the heart without increasing the number of its pulsations. The next effect is a paralysis of the muscular tissues of the heart, so that the ventricle stops first and the right and left auricles next, in the order in which they are named. In a majority of the frogs poisoned by vao, the heart remained galvanically irritable for a certain time after the organ had ceased to pulsate. The heart stops before the voluntary motions are at an end, in all cases of rapid poisoning. When poisoning occurs by absorption from a mucous surface, the phenomena march more slowly, and voluntary control and reflex power are sometimes lost before the heart has entirely ceased to beat. Vao stops the respiration in warm-blooded animals by arresting the circulation, and so paralysing the nervous system, without which respiration is impossible, so that the checked respiration is a consequence and not a cause of the injury to the cardiac functions. * * * The facts last quoted, and the inability of artificial respiration to restore or sustain the cardiac movements in warm-blooded animals poisoned by vao, proves sufficiently that the first effect of the poison is upon the heart, and that the appearances of asphyxia observed *post mortem* in rabbits, cats, etc., are of secondary importance so far as concerns the cause of death.”

The arrow poison employed in the experiments of Drs. Hammond and Mitchell was brought, in February, 1857, from the Rio Darien, in the province of New Granada, South America, by Drs. Ruschenberger and Caldwell, of the United

* *Ibid*, p. 58.

States Navy. There is no reason to suppose that the drug employed by them has ever been offered for sale, or used by other experimenters who have reported the results of their experiments; since the bibliography of this subject would seem to indicate by the peculiar physiological action of the remedial agents, where it has been described, that in all cases the substance employed was the same as that reported on by Bernard and Virchow and Münter, inasmuch as the character of the effects produced was always the same, although the degree varied in different cases. It is generally admitted that the drug must be introduced directly into the circulation, in order to produce either its medicinal or poisonous effects with any degree of certainty or regularity; and consequently when swallowed into the stomach, it is either inert, or very uncertain in its action.

The most plausible explanation of these facts is based on the supposition that the absorption of the drug by the mucous membrane is tardy, while its elimination by the natural emunctories is comparatively rapid, although it may be possibly due to chemical changes in the medicinal agent effected by the fluids of the stomach. The practical lesson taught by these facts is, that the drug should always be administered hypodermically.

In order that I might study the physiological action of this drug, and, at the same time, determine to some extent the comparative value of various specimens, I have recently made a limited number of experiments. The woorara used in these experiments came from five different sources, and the specimens were found to differ widely in their physical appearance, and still more markedly in the degree or intensity of their action, although the same phenomena were produced when the quantity was properly regulated. In the winter of 1876, I obtained from Albert Dung, of New York, some woorara, a part of which was then made into a solution for hypodermic use, and the balance was preserved in the solid state until just before the performance of these experiments. The other specimens of this drug were secured during the autumn of 1881, or in the early part of the winter of 1882, and were all, when they came into my possession,

in the solid state—the solutions having been prepared only a few days before required for use. The article which seemed to be generally offered for sale by the druggists of New York and Philadelphia was labelled “E. Merck, Darmstadt,” although I obtained from the house of Lehn & Finck, of the former city, an inferior drug which bore no mark indicating the source from which it originally came. Prof. Jno. C. Dalton, of New York, kindly supplied me with one specimen which was employed in three experiments, and another was received from Dr. Reichert, of Newark, N. J.

The quality of each specimen may be reasonably inferred by its physiological action, and its relative strength by the quantity required to destroy the life of a rabbit, since these animals were of nearly uniform size and strength, and therefore presumed to possess about the same power of resistance. The physiological action of the drug was of the same kind in all of our experiments, but the quantity required to produce death with the following specimens was as follows:

Reichert's	gr. $\frac{1}{20}$
Merck's.....	“ $\frac{3}{20}$
Dung's.....	“ $\frac{3}{20}$
Lehn & Finck's.....	“ $\frac{7}{20}$

whilst the administration of one-third of a grain of the specimen procured from Prof. Dalton was followed by a very slight manifestation of its peculiar action, and the animal fully recovered.

Having already shown the variable strength of the drug, I now desire to call attention to the fact, that although it is unquestionably impaired by long exposure to the air, still it may retain, under favorable circumstances, its active principles several years. The specimen obtained from Mr. Dung has been in my possession more than five years. One part of this drug was then made into a solution, and put into a glass stoppered bottle, where it remained undisturbed until a few weeks ago, and the others were kept in a solid state during the same period, but since brought into liquid state for hypodermic use. The old solution is now as efficacious

as the new, but neither possess more than one-third the power which belonged to it five years ago.

We will now proceed to the presentation of some of the more important results of our experiments. There were employed in these experiments five dogs and twenty-nine rabbits, and the administration of the woorara was followed by four deaths, with only one recovery in the canine family, although the rabbits were more fortunate, since there were eleven deaths and eighteen recoveries. The following are records of a few typical cases:

Dog No. 1, a small brown puppy, weight 8 pounds. Injected hypodermically at 2.47 P. M. two-fifths of a grain of woorara. 2.57 P. M., pulse 150; 3.11 P. M., lachrymation and salivation; 3.17 P. M., movements unsteady—posterior extremities drooping; 3.18 P. M., pupils widely dilated; pulse 100 and regular; respiration 36. 3.23 P. M., salivation marked; some muscular twitchings. 3.25 P. M., voids urine; pupils still widely dilated. 3.30 P. M., pulse 60; respirations very slow and irregular; eyeball insensitive to touch. 3.37 P. M., pulse 53 and regular; respiration 4. 3.38 P. M., no respiration during the last minute. The heart continued to beat two minutes after the respirations ceased.

Dog No. 2, a large shepherd dog, weight 35 pounds. 2.50 P. M., injected hypodermically one-half a grain of woorara. 2.28 P. M., walks like a horse suffering with spring-halt—want of muscular co-ordination, seems weak in the loins. 3.47 P. M., posterior extremities are becoming weaker; has fallen twice; pupils widely dilated; sits on haunches. 3.51 P. M., can still walk, but with much effort; lifts the hind legs yet as if suffering with spring-halt; mouth is open and tongue is out. 3.57 P. M., salivation is present. 4.00 P. M., cannot stand; makes useless efforts to rise; pupils widely dilated. 4.05 P. M., eyeball sensitive; wags his tail when called. 4.08 P. M., slight muscular twitchings. 4.16 P. M., pulse 128; moves his head slightly; pupils dilated. 4.20 P. M., tries to get up, but can only move his head. 4.30 P. M., tried to get up, and is apparently recovering. *February 12th.* When I opened the door of the lab-

oratory this morning the dog ran out apparently as well as ever.

Rabbit No. 1. Injected hypodermically at 4.13 P. M. one-tenth of a grain of woorara, which is double the amount required to kill the animal. The movements and general appearance of the rabbit are unnatural, although the pupils are not widely dilated. 4.22 P. M., cannot stand; pupils contracting; no salivation. 4.24 P. M., respirations regular; heart beats strong and slow. 4.26 P. M., pupils widely dilated; pulse 91 and regular; no respiration during the past minute; heart continued to beat two minutes after the respirations ceased.

Rabbit No. 2. The solution of woorara was injected at 3.57 P. M. 4.13 P. M., pupils dilated; gait staggering. 4.14 P. M., falling on side; cannot walk; makes efforts to rise, but cannot. 4.16 P. M., pupils not so much dilated; respirations regular and easy; eyes sensitive to the touch. 4.37 P. M., eyes more sensitive to the touch; respiration unchanged. 4.46 P. M., slight muscular twitchings of the anterior portion of the body. 4.54 P. M., general muscular tremor. 4.58 P. M., pupils contracted; eyes not sensitive to touch. 5.20 P. M., eyes again sensitive to the touch; muscular tremor more marked; makes attempts to stand. The next morning the animal had fully recovered.

Rabbit No. 3. The injection of woorara was given at 4 P. M. 4.10 P. M., unwilling to move when urged; pupils widely dilated. 4.11 P. M., cannot stand. 4.12 P. M., muscular twitchings; pupils contracting; eyes sensitive to the touch. Heart ceased to beat at 4.16 P. M.—there having been no respiration for the preceding three and one-half minutes.

Our experiments confirm the conclusions expressed by Bernard, Virchow and Münter, and others in regard to the physiological action of this drug, as may be seen by an examination of the above record of cases. But a brief mention of the symptoms which appear after the hypodermic injections may be of some value to the profession when given in the order of their occurrence.

It ought to be mentioned here that the symptoms produced

in the dog and rabbit by this drug are not precisely the same, the chief difference consisting in the presence of lachrymation and salivation in the former class of animals, and their complete absence in the latter. The first indication of the action of the drug is commonly shown by more or less restlessness or uneasiness of the animal, and this condition is soon followed by dilatation of the pupils, frequent and irregular pulse, rapid and irregular breathing of an abdominal character; and the above symptoms are succeeded (when the dose administered has been large) by others which belong to the paralytic group, and are generally developed in the following order: Weakness in the loins, which appeared more marked in the dogs than in the rabbits, and was manifested by a want of muscular co-ordination—affecting the posterior extremities—drooping or dragging of the same, awkward gait, etc. In the majority of the animals experimented on, the posterior extremities appeared to be affected somewhat sooner than the anterior, although it required only a brief period to produce the same condition in the latter, which has already been described as pertaining to the former. The animals then soon passed into a helpless condition, *although they appeared to retain consciousness and remain sensitive to pain, since they winced when injured; and the dogs, so long as they were able to move, even though unable to stand, would wag their tails when called, and give other evidence of recognition.* The pulse and respiration were both accelerated and rendered more or less irregular prior to the commencement of the paralytic stage; but when the animal had come fully into this state, an important change took place. The action of the heart now becomes perfectly normal in force and frequency, and remains so until after the cessation of respiration. The respirations, which are abdominal in character, become gradually less frequent, until they finally cease. The cessation of the heart's action did not precede the complete failure of respiration in a single instance during our experiments. The muscular twitchings, which are mentioned, seemed to be closely associated with the initial and convalescent stages of paralysis, and were chiefly dependent on voluntary effort of motion. Moderate doses of the drug

commonly produced within half an hour a marked dilatation of the pupils, while the large doses, which proved quickly fatal, caused but little or no dilatation, and were soon followed by a decided contraction of the same, which continued until the animal passed into *articulo mortis*.

The chief indications of danger to the life of a patient after the administration of woorara are found in the contracted pupils, a complete paralysis of the voluntary muscles of the body, as shown by a total inability to move, and complete absence of all muscular twitchings. But unquestionably the most important symptom in these cases, and the one on which the physician may rely with entire confidence is the slow respirations. I have never observed a sudden cessation of the respiration, but, on the contrary, it is gradual, and commonly proceeds with much regularity, thus affording ample warning of danger and full opportunities for the application of remedial measures.

Having carefully examined the physiological action of this drug, I am now convinced that its medical use is rationally indicated in the treatment of many nervous affections, *but more especially in those diseases accompanied by violent convulsive actions, which endanger, directly or indirectly, the life of the patient*, inasmuch as this procedure may give to nature the requisite time for the elimination of the *materies morbi* on which the malady depends. A rather cursory examination of the medical literature for the last six years reveals the fact that woorara has been employed in the following diseases with the accompanying results:

	Whole Number of Cases.	Recovered.	Improved.	Not Improved.
Rabies.....	17	4	7	6
Tetanus.....	23	11	...	12
Epilepsy.....	80	5	...	75
Catalepsy.....	1	...	...	1
Chorea.....	2	...	2	...
Paralysis agitans...	1	...	1	...

The above figures are sufficiently encouraging to justify the conclusion that woorara is a *most valuable remedial agent*. In fact, we may now boldly assert that no medicine has ever

been employed in the treatment of rabies which has yielded *equally encouraging results*; and, furthermore, that the well-established knowledge which we now possess of its physiological action leads us to expect better success for the future in the management of these cases. We have the record of twenty-three cases of tetanus treated with this drug. Only two of these were idiopathic, the others being traumatic; and, consequently, we find in these figures most encouraging proof of the curative powers of woorara in this much dreaded disease, which, only a few years since, was regarded as incurable. The results obtained in the treatment of epilepsy by this drug are not flattering, although as good as could be reasonably expected when due consideration has been given to the peculiarly obstinate character of the disease and the physiological properties of the medicine. In regard to the use of the drug in catalepsy, chorea and paralysis agitans, it only remains to be said that the limited number of cases in which it has been employed affords no adequate opportunity to determine its value in the management of these diseases.

Thus far we have only spoken of the use of this drug in those diseases in which its well known physiological properties seemed to indicate its especial fitness for their management; but unquestionably further experimentation with this medicine will put us in possession of important empirical facts, and thereby greatly extend the employment of this powerful remedial agent. The principal obstacle in the way of the employment of this drug arises from the fact that the samples found in the drug market are of variable strength, and since the remedy is often required for emergencies, the physician has no opportunity to determine the proper dose prior to its administration. This obstacle may be easily overcome if our manufacturing chemists will supply us with the active principle of woorara, which should always be of uniform strength and consequently at all times available. M. W. Preyer, at the request of Bernard, succeeded in isolating a crystallizable alkaloid, which is undoubtedly the active principle of woorara and which has received the appropriate name of *curarine*. M. Bernard has proved that curarine is

identical in the character of its operation with woorara, but it is at least twenty times more powerful. This identity extends even to the difficulty of absorption by the intestinal canal, and consequently renders its introduction into the circulation with the hypodermic syringe a necessity when it is employed in medical practice.

It must now be apparent, that owing to the uncertain strength of the woorara found in the drug market, it is wholly impossible to mention even an approximate dose: and consequently the physician who intends to employ it should, if possible, first determine its relative strength by experiments on animals; or should he be compelled to use it in an emergency, then I would suggest that, in cases of rabies or traumatic tetanus, where promptness in action may save the life of the patient, the first injection should be only one-sixteenth of a grain, *but that this dose should be doubled every half hour until its full physiological action is secured* or the patient completely relieved. Either cowardice or negligence, on the part of the professional attendant, in the treatment of these diseases, ought to be regarded as a crime, and woorara should only be administered in these cases while an intelligent physician is in continuous attendance. There exists a double necessity for a strict adherence to this rule in the management of both these diseases. The first arises from the fact that the life of the patient may depend on promptly securing *the full and continuous physiological action of the drug*, while its administration at such short intervals requires constant watchfulness on the part of the physician; although its use is unquestionably safer than that of morphia, since a timely resort to artificial respiration is always attended with complete restoration.

ART. II.—Stone in the Bladder.—A Clinical Lecture. By Prof. D. HAYES AGNEW, M. D., Philadelphia, Pa.

This boy has suffered for the past year from trouble with his water. He micturates very frequently, and upon inquiry I find that this frequent micturation is attended with a good deal of pain at the termination of the act. He has to rise

very often at night, and there is a great tendency to tenesmus during the act of defecation. There is also a considerable amount of irritability about the prepuce, and a constant disposition to draw upon it. These symptoms all point to the existence of a urinary calculus.

Only yesterday I saw a man who had all the symptoms of this condition, and yet when I came to introduce the sound, and after a prolonged and painstaking examination, I failed to discover a trace of calculus.

It is a very good rule, which has been made by custom, and which generally commends itself, that the operation is never justifiable, in such cases as these, unless you can feel the stone before you begin to cut. You may have detected it a half-dozen times previous to the moment of operation, but do not operate unless you can touch it with your sound (with sounding-board attached) then and there. These calculi have a great habit of hiding. The bladder can catch and hold a stone by means of a local spasm of its muscles so that it is impossible for us to detect its presence in the bladder. Again, we may have a sacculated bladder in adult patients, and the stone may be shut up in one of these sacs. Or if the stone obstructs the flow of the urine, the pressure exerted upon it from behind may create a pouch by dilating a limited portion of the bladder, and so form lodgment and concealment for the stone. Under still other conditions the stone may become covered by a wall of lymph, but this is only an exceptional occurrence.

There are various modes of sounding the bladder. It may be sounded when it is full or when it is empty; when the patient is standing up or when he is sitting down. The long prepuce present here is due to the constant traction exerted upon it. The sound is now in the bladder, and upon fitting the sounding-board to it and bringing the distal end into contact with the stone, you can all plainly hear the rattling noise.

In preparing the patient for the operation which I intend to perform before you to-day, the first thing which we have done has been to bring him into as good a condition as possible. This has been accomplished by the use of a strength-

ening and well-selected diet, by the internal administration of the alkalies and the tincture of the chloride of iron, and by the employment of opium suppositories by the rectum. The operation which I shall proceed to perform is that known as the lateral operation for stone in the bladder. It is performed on the left side of the perineum. If you look with me at this model, you will see that the superficial parts of the perineum have been removed in order to adequately display the deeper structures. Here, you see, is the bulb of the urethra; on either side are the crura of the penis. These cruræ, separating as they do, leave the space into which we must work our way in the operation. The ischio-rectal fossa, as you all know, lies between the side of the rectum and the tuberosity of the ischium. To go through the various steps of the operation before performing it, you first divide the skin and superficial fascia. This brings you to the middle perineal fascia. Under this fascia is the deep perineal fascia, or the triangular ligament. This consists of two layers, and it is with this structure that we have most to do.

In making the incision, I begin at the median line of the raphé, and carry the knife to a point midway between the anus and tuber ischii. I thus divide the fat of the middle perineal fascia. Deeper still I divide the transverse perineal artery. The first bleeding that occurs is usually from this artery. After having cut thus far, I feel for the grooved staff held firmly in the urethra by my assistant. You must always be very careful not to carry the knife too far out towards the internal pudic artery. Having gone thus far, I now direct the point of the knife towards the staff, and running it down the groove, I divide the compressor muscles of the membranous urethra and the prostate body, which opens my way into the bladder. Before beginning the operation I am careful to see that the table is firm and the light ample. As it is absolutely necessary to the success of the operation that the patient's bowels be kept entirely closed for some days, I gave orders that the nurse should administer a gentle purgative early this morning and follow it by an injection. When the contents of the large intestine were all expelled,

twenty-five drops of laudanum were administered. Having sounded in your presence for the stone and found it, the next thing I shall do will be to inject a good quantity of water into the bladder.

Now everything is ready; but first let me introduce the grooved staff into the urethra. I have, as you see, inserted it, and pushed it well up under the arch of the pubis. My assistant will now maintain it firmly in this position. You notice that I have adjusted it so that its handle makes almost a right angle with the plane of the patient's body. I now kneel down in front of the operating table, and by two well directed and rapid movements I lay the parts open and carry the point of the knife down the groove and so into the bladder. The water which I have injected spurts out of the opening thus made, tinged with blood. The bleeding, however, is so insignificant that we may entirely disregard it. All that now remains to be done is to extract the stone. For this purpose I shall use a pair of duck-bill forceps. The stone is so large that I am afraid it will be no easy matter to remove it, although my incision was a free one. You must always be careful not to catch up any of the mucous lining of the bladder with the forceps in searching for the stone. After tugging at it slowly but steadily for two or three minutes, I have succeeded in removing the calculus. It is very large—about the size of a hen's egg. Part of it has been broken off by the forceps and left behind in the bladder. These fragments must be carefully washed out by an injection of water into the bladder through the opening. The wounded transverse perineal artery has been giving rise to some little hæmorrhage, but my assistant has now ligated it securely. As regards our after-treatment, the boy shall be at once put to bed, and a "draw" sheet placed under him, so as to soak up the urine and other discharges from the wound. As soon as he recovers from the effects of the anæsthetic, I shall order the resident physician to administer a grain of opium by the rectum. When the traumatic fever, generally consequent upon the shock caused by the operation, has passed away, which will no doubt be in the course of a day or so, we will begin to feed the patient and try to

build him up rapidly by the use of a good, nourishing diet. I will not touch the wound for the present further than to order it to be kept clear of obstructions until healthy granulations appear.

The patient subsequently recovered rapidly from the operation, without a single unfavorable symptom.

ART. III.—**Medical and Surgical Jottings**—(1) **Acute Laryngitis**; (2) **Scirrhus of the Breast**; (3) **Mal-position of Twins in the Uterus rendering Natural Delivery Impracticable**; (4) **Quinine in Abdominal Congestion**; (5) **Turpentine in Pelvic Neuralgia and Sciatica**. By J. ALEXANDER WADDELL, M. D., Staunton, Virginia.

Acute Laryngitis.—One of the most painful and distressing symptoms attending violent attacks of laryngitis is difficult deglutition. In some instances, this trouble amounts to inability to swallow even the saliva.

Two such cases, and only two with such complications, have occurred within my practice. The first occurred many years ago. Captain G., of this county, getting very much overheated in his harvest field, imprudently sat down to cool; removed his cravat and drank abundantly of ice-water. This induced the attack. I was sent for in consultation. I found him in the distressed condition alluded to. Nothing but tracheotomy seemed to offer much promise of relief. But prior to this operation, I determined to try the effects of a probang dipped in a strong solution of nitrate of silver, and applied within the glottis.

There was at that time no precedent for this mode of treatment. Subsequently, in a note, simply under the head of Laryngitis, Dr. Flint in his "Practice" alludes to the plan as detailed to him by a medical student, who had experienced the good effects of it in his own practice.

After preparing a suitable probang, I inserted it for a moment, and upon its withdrawal gave the patient immediately a spoonful of hot coffee, which was swallowed with great difficulty; then other sips were taken with more ease, until the cup was emptied. The paralysis was overcome. No further

trouble was experienced, and the patient recovered under the ordinary methods of treatment.

Several years after this, during our civil war, I was sent for one night to the Military Hospital under my charge, to see a soldier suffering in this way. The surgeons in attendance thought of nothing else but an operation. I tried the above plan, and with the same result as in the first mentioned instance.

Scirrhus of the Breast.—Some years ago I was called to see a lady of about 55 years of age. The servant who came for me said she was bleeding from the breast. On my arrival, I was told that for sixteen years she had had a lump in her breast; that latterly it had become an open sore, and that she had suffered from several hæmorrhages. Upon examination, I found a tumor of the size of a turkey egg imbedded in the breast, with the surface in the state of ulceration, and presenting all the characters of what is considered open scirrhus. The lady's health and spirits were wretched; her skin was sallow, her appetite poor and the axillary glands enlarged. Hoping that an operation might protract her life for a year or two, I advised excision of the diseased breast. Having a great horror of the knife, she objected to the operation and gave herself up to the gloomiest forebodings.

About this time a Dr. Fell, an American cancer doctor, was exciting quite a sensation in London by "his cures of cancer." He had proposed to the London Faculty to select unmistakable cases of cancer, to give him a hospital and assistants, and in six months, if they would publish the result of his treatment, he would then publish to the world the remedies he used and their method of administration. This was agreed to, and Fell's method was published at the proper time in various European and American journals, and, as it happened, just at this time.

I prevailed upon my patient to try Fell's method, which consisted, as is well known, in the main, in the application of chloride of zinc in the form of paste with flour, to the affected part. This I combined with the internal use of the chlorides, then much in vogue in European hospitals, along with Peruvian bark. On my own part, I prescribed a weekly use of

blue pill; and as a soother to the part, when necessary, a solution of nitrate of lead. This last gave great relief to the patient, after several days application of the chloride of zinc. It was always discontinued upon re-application of the zinc. The first step in the operation was the destruction of the tissues covering the tumor by concentrated nitric acid, so as to obtain a plain surface. After this the paste was applied. In this way the treatment was pursued, both local and general, for six months. At the expiration of this time, not only the tumor had disappeared, and a beautiful cicatrix formed, but the patient's general health *seemed* completely restored. She remained in Staunton for twelve or eighteen months, and then removed to a neighboring county. I never saw her again, but understood that, at the expiration of two years, the disease returned, and she finally died. No remedies were used. Despairing of ultimate relief, and having suffered previously so much from the local applications, she refused to return to me.

Whether the same result as before would have occurred, of course we cannot tell.

While this case shows that by appropriate treatment, under the circumstances, human life may be protracted and made comfortable for a limited period, it also affords additional evidence of the incurability of cancer.

Mal-position of Twins in Utero rendering Natural Delivery Impracticable.—On the 5th of October, 1875, I was called to see Mrs. B., in her first confinement, in consultation with Drs. Donaghe and Hanger—her physicians. I was informed that she had been in labor for twenty-four hours. Dr. Donaghe informed me that the pains for six hours were unusually violent; that the head of one child protruded, and that the head of another could be distinctly felt in the cavity of the pelvis. Upon examination, I found such to be the case. Traction during the pains caused no advance whatever. There evidently was an unusual obstruction, but of what character no one of us could tell at first. Finally, being satisfied that the head of fœtus No. 2 occasioned the trouble, and that the lady could not be delivered in any other way, we determined to open the cranium of the second child.

Upon the accomplishment of this, very moderate traction, with a pain or two, expelled the first child. The second foetus soon presented and the patient was relieved.

Upon examination after the delivery we found an indentation upon the upper part of the sternum of child No. 1. The forehead of No. 2 had rested in this indentation in utero, and descended in this position. In this way a dead-lock was made. No other explanation could be made in this case, which so seriously effected the delivery *per vias naturalis*.

Quinine in Abdominal Congestion.—Miss S., aged 20 years, was taken violently sick. I was requested to visit her. I found her with well-marked inflammation of the bowels, excessive tenderness, a rapid, small pulse and certain other symptoms which made me fear intussusception also. The treatment, in the main, consisted of fomentations over the abdomen, calomel and opium internally, and frequent alkaline enemata. Finding no improvement, I endeavored to bleed her, but the veins were so collapsed that the blood would not flow. I then determined to try the effects of quinine, and gave her four grains every two hours, which she retained. After several doses had been taken, I found the pulse much improved—fuller, more vigorous and slower, but there was no action on the bowels. The family being much alarmed, I called Drs. R. S. Hamilton and Hinkle in consultation. We agreed to try venesection again, and were delighted to find the “bowels give way” during the flow of blood. All the symptoms improved visibly; and after a rather tedious convalescence, our patient entirely recovered.

Spirits of Turpentine in Pelvic Neuralgia and Sciatica.—In a variable climate such as ours, rheumatism and neuralgia in their various forms are prevalent diseases. It is a singular fact, that at certain periods, when the rheumatic tendency prevails, we often find many persons attacked in the same part of the body, and at other times in other parts. I have seen endemic sciatica. If this disease is not relieved in 36 or 48 hours, it often fastens on the system for weeks or months.

Shortly after one of these epidemics, I met with Dr. H. M. Patterson, of Highland county, Va.; and on mentioning the

disease referred to, deplored the failure of remedies recommended as efficient. Dr. Patterson stated that my father, the late Dr. A. Waddell, had pointed out to him an article in the *American Journal of Medical Sciences*, in which it appeared that very large doses of turpentine were very efficacious in such affections. I had forgotten this—crowded out as it had been by the “new remedies.” Not long afterwards, I was called to see a lady suffering with pelvic neuralgia. I prescribed a teaspoonful of spirits of turpentine in two table-spoonfuls of mucilage every four hours, with most striking relief.

I have used this remedy now for several years almost exclusively. I have rarely met with any severe cases of strangury following its use in such doses. My invariable directions are, as soon as burning of the urinary organ occurs, to use an enema, consisting of a teaspoonful of laudanum in a wineglassful of cold water, and discontinue the turpentine. This invariably, so far as my experience goes, will give prompt relief; while the patient will be found cured of his malady, provided there is no effusion within the sheath of the nerves.

Proceedings of Societies.

The Virginia State Pharmaceutical Association.*

The first annual meeting of the Virginia State Pharmaceutical Association convened in the hall of the House of Delegates, Richmond, Va., May 16, 1882, at 3:45 o'clock, T. Roberts Baker, Esq., of Richmond, Va., President, in the chair.

After prayer by Rev. M. D. Hoge, D. D., Mayor W. C. Carrington welcomed the members to the city in a brief but exceedingly appropriate speech.

Mr. Santos, of Norfolk, responded on behalf of the Association.

Upon a call of the roll, the following officers and members were found to be present: T. Roberts Baker, Richmond, President; C. A. Santos, Norfolk, First Vice-President; F.

* We avail ourselves freely of the excellent reports made by *The State and Daily Dispatch* in preparing this report of the proceedings of this body.

H. Masi, Norfolk, Treasurer; E. R. Beckwith, Petersburg, Secretary; C. B. Fleet, Lynchburg, Corresponding Secretary. Members—Polk Miller, P. E. Dupuy, Hugh Blair, Jesse Child, R. W. Powers, John W. Pierce, O. O. Owens, H. Bodeker, H. G. Forstmann, John B. Purcell, Thomas S. Winn, R. H. M. Harrison, John Purcell, J. F. Crane, W. M. Williams, of Richmond; C. L. Wright, J. P. Banks, John A. Wells, J. S. Bingley, George C. Starke, of Petersburg; H. W. Cole, H. A. Wiseman, R. Brydon, of Danville; C. P. Penson, of Charlottesville; B. P. Eggleston, of Smithville; N. B. Schmitt, of Woodstock; G. A. Conway, E. W. Weisiger, of Manchester; G. E. Faulkner, of South Boston; J. W. Thomas, Jr., Edward C. Jackson, J. W. Thomas, of Norfolk; Frederick Durr, of Portsmouth; A. S. Briggs, of Hicksford.

The President then read his first annual address, which is a well-prepared paper, and full of valuable suggestions to the Association. He noted the fact that while Virginia and Massachusetts were the oldest States of the Union, they were among the last to organize pharmaceutical Associations. The Massachusetts Society was organized on May 7th of 1882, with 200 members.

On motion of Mr. Bingley the President was directed to send by telegraph greetings to the Massachusetts State Pharmaceutical Association, which assembles in Worcester tomorrow morning.

The Secretary read the minutes of the meeting held in Petersburg in February last, and on motion of Mr. Benson the action of that meeting was endorsed and ratified by the Association.

The President suggested the importance of having an executive committee, as all applications for membership would have to be passed upon by that committee.

Mr. Miller moved that the President proceed at once to appoint the committee.

Mr. J. B. Purcell made the point that the Constitution called for an election, which the President decided was correct. Carried. The following gentlemen were chosen members of the committee—Messrs. John B. Purcell, Richmond; H. A. Wiseman, Danville, and George C. Starke, Petersburg.

The following Committee on Business was appointed by the Chair: Messrs. C. P. Benson, Charlottesville; Polk Miller, Richmond, and J. S. Bingley, Petersburg.

On motion of Mr. Thomas, the 10th article of the By-Laws

was suspended in order to allow the Executive Committee to report on a number of applications for membership.

Mr. Purcell, on behalf of the committee, then presented the names of twenty gentlemen, in addition to those above named, who were unanimously elected members of the Association.

On motion of Mr. Thomas, the Association adjourned until 11 o'clock to-morrow morning.

SECOND DAY—*May 17th.*—The Association met at 11 o'clock—President Baker in the chair.

Secretary Beckwith read his first annual report, from which it appears that the Association starts out with the most flattering prospects for the future.

The President stated that, in pursuance of a motion adopted yesterday, he had sent the telegraphic greeting to the Massachusetts State Pharmaceutical Association.

The annual report of Treasurer Masi was read and received.

Mr. Starke, of Petersburg, asked for the sense of the Association in regard to the license of power to be observed by the Executive Committee in its construction of section 1 of article 3 of the constitution, in regard to eligibility of applicants for membership. This provoked extensive debate, participated in by Messrs. Starke, Benson, Purcell, Scott, Santos, Thomas, Miller, Bingley, and others.

It seems that Mr. Treat, of West Point, who was elected a member of the Association on Tuesday, conducts a general merchandise business at West Point, and is also the agent or salesman of a wholesale Baltimore drug-house.

Mr. Starke was of opinion that Mr. Treat's connection with a wholesale drug-house in the capacity of agent or salesman was no evidence that he was actively engaged in the practice of pharmacy, as required by the constitution, and he therefore thought that the action of the Association in electing Mr. Treat ought to be reconsidered.

This proposition was opposed by those who took part in the discussion, and it was finally decided to refer Mr. Starke's inquiry to the Executive Committee.

Mr. J. B. Purcell, of Richmond, then proposed to amend the 1st section of article 3 of the constitution so as to more clearly define the qualifications of applicants for membership.

Mr. Brydon, of Danville, also proposed to amend the same article by adding an independent section, as follows:

"Section 3. That a member of this Association who has

been regularly elected thereto shall be entitled to retain his membership whenever he may move his residence to another State."

Both amendments lie over until the next annual meeting.

Messrs. Randolph & English, manufacturers of pill-boxes and other articles of interest to pharmacists, through Mr. Miller, extended an invitation to the Association to visit their establishment.

A communication was also read from the Young Men's Christian Association inviting the members to visit the rooms of the Association during their stay in the city.

The Secretary read the report of the committee appointed by the Petersburg meeting to procure the passage by the last Legislature of what was known as the "pharmacy bill." The committee say in their report that they used their best endeavors to get the bill through, but failed.

Mr. Benson moved that the bill be taken up and considered by sections, so that the Association might have the opportunity to make any alterations which might be deemed proper before it was again presented to the Legislature.

Messrs. Starke and Miller opposed the motion. They thought it would be best to let the bill go back to the Legislature in its present shape.

Mr. Santos favored the motion. The bill having been prepared with great care, he did not think it would be materially altered, and the endorsement of the Association would be advantageous to it.

Mr. Benson's motion prevailed, and the President proceeded to read the bill by sections.

Pending its consideration the Association took a recess until 4 o'clock P. M.

Afternoon Session.—President Baker resumed the chair at 4 o'clock P. M.

The following-named persons were elected members of the Association upon the recommendation of the Executive Committee: Messrs. J. C. Williams, W. H. Snook, M. C. Hall, G. G. Minor, J. C. Snellings, Henry Cook, E. P. Reeve, J. S. Heaton, Philip M. Slaughter, W. W. Walke, T. M. Saunders, Samuel J. Turner, and C. A. Berrian.

The President announced the following committee on "Queries and Papers": Messrs. J. W. Thomas, Jr., Hugh Blair, and H. W. Cole.

Messrs. Polk Miller, T. F. Knock, T. Roberts Baker, H. W. Cole, and F. H. Masi were elected delegates to the American Pharmaceutical Association, which meets at Niagara Falls the second Tuesday in next September.

The Association then resumed the consideration of the "pharmacy bill," which, after being slightly amended, was endorsed, and will be presented to the Legislature at its next session.

Mr. Harrison, of Richmond, inquired if the President had received a response to the telegram sent to the Massachusetts Pharmaceutical Association. The President replied that he had not, but that he had received a telegram from the New Jersey Association, which reads as follows:

ATLANTIC CITY, N. J.

T. Roberts Baker:

The New Jersey Pharmaceutical Association send fraternal greetings to its young sister, and hope they have been successful in organizing with a large and healthy membership.

[Signed]

R. W. SLONDERANT.

The President was requested to reply, and also to send greetings to the Kentucky Association, now in session at Covington, Ky.

A number of "votes of thanks" were voted for courtesies extended the Association.

The city of Norfolk was selected as the next place of annual meeting.

Mr. Thomas, of Norfolk, read an article on the "Toxic Properties of Chlorate of Potash."

Colonel Purcell read a paper entitled the "Duties of an Apothecary in the Olden Time" as indicating how well defined were the duties of an apothecary even in the sixteenth century.

Both gentlemen received the thanks of the Association.

Before putting the question of adjournment, *sine die*, the President begged to make a few remarks, and said that he could not part with the members of the Association without expressing his thanks for the kindness and forbearance which had been extended to him in his efforts to faithfully and impartially discharge his duties as their presiding officer. He congratulated them on having had a successful and profitable meeting, and wished them a safe return to their homes, and then the Association adjourned.

At night the Richmond Pharmacists entertained the visiting members at a splendid banquet at Snger Halle. The tables were most tastefully spread, and everything to tempt the palate was served in profusion. A number of well-prepared toasts were handsomely responded to.

Analyses, Selections, etc.

(By Jacob Michaux, M. D., Richmond, Va.)

Hepatic Diseases in Gynecology and Obstetrics is the caption of a lecture in the *Med. Classics*, Sept. 1881, by J. Matthews Duncan, M. D., of St. Bartholomew's Hospital, London, England. This gentleman is of opinion that many gynecological troubles are often attributed to hepatic disease—an insufficient evidence, since such troubles as amenorrhœa up to fatty liver, etc., may occasion them. These conditions are often seen in phthisical women; but the amenorrhœa in these cases is clearly attributable to the phthisis. He puts no faith in the statements of many learned authors in regard to the pressure exerted by the gravid uterus upon liver, kidneys, etc., and denies that there is any proof of undue pressure upon these organs. There is a watery condition of the blood, and a kind of parenchymatous degeneration of the liver, which is a normal condition during utero-gestation which render the organ more liable to disease. Icterus gravidis or yellow atrophy of the liver, is a formidable disease, but fortunately a rare one, often causing convulsions and hæmorrhage from bowels, stomach or uterus. The coloring of the skin is not as deep as in the ordinary forms of jaundice. Many remedies have been tried, but emptying the womb is the surest that has yet been used.

[Dr. R. T. Coleman, Prof. Obstet., Med. Coll. Va., called the attention of the class to this subject in 1875-6, and stated that he regarded it as a most grave complication.—J. M.]

Lumbo-Colotomy in the New-Born for Relief of Imperforate Rectum, is the title of a paper by Dr. Wm. A. Byrd, Quincy, Ill. The operation was performed on the left side, and the patient did well; but at the request of the parents, Dr. B. operated a second time (Oct. 21st, 1881), to establish a channel for the fæces through the anus. On passing a finger downwards into the rectum from the artificial anus, it was found to narrow down to the size of the appendix vermiformis, and finally to cease to be pervious about three inches from the anus. Down into this narrow portion of the bowel a small sound was passed as far as possible and an incision was made, extending back to the coccyx, upwards from the anus till the sound could be felt in the narrowed bowel above. The sound

was then forced through one-eighth inch of intervening tissue against the finger in the anus, and allowed to protrude from the anus. A stout thread was attached to the sound, to one end of which a No. 10 Jacques catheter had been secured. The sound was next withdrawn through the artificial anus, leaving the catheter protruding, one end from each anus. A compress with a bit of "rubber dam" under it was then secured to the end of the catheter which protruded from the artificial anus, and the catheter drawn down somewhat so as to plug the artificial opening to some extent. The patient nearly succumbed to the shock of this operation; and Dr. Byrd waited to complete the operation, which was done by taking a piece of soft gum tubing of the size of the little finger, and one foot long, and invaginating half an inch of one end, which was firmly tied to the end of the catheter, which had been left in the position above described, and which was next drawn downwards, pulling after it the expanded end of the tube, which, lodging firmly in the mucous membrane of the narrowed portion of the intestine, drew it down to the anus. On the 17th November following, the tube was removed and the little finger passed readily up the opening, which was found covered throughout with mucous membrane. Dr. B. thinks the artificial anus will close spontaneously with only a well-adjusted pad applied, but should it not, he will operate.—*St. Louis Courier of Med.*

Therapeutics of Phthisis.—Dr. E. S. Jordan, writing on this subject in the *Chicago Med. Times*, Nov. 1881, after giving some useful advice on the subject of diet for consumptives, next proceeds to discuss the various remedial agents with which he has had the best success, viz.: cod-liver oil, petroleum oil (crude), phosphorus, the hypophosphites, extract of malt and glycerine (this best with whiskey). The writer here says that Dr. M. L. James, of Richmond, Va., was the first to bring this combination before the profession, in a very able paper on this subject, read before the Medical Society of Virginia, 1878. Dr. Jordan very well says, that many fail to produce beneficial results by the administration of remedies of known value in this formidable disease, very often because the administration is untimely. He insists that it is worse than useless to administer cod-liver oil when there is evident digestive derangement manifest from coated tongue, nausea, headache, constipation and fever. On the other hand, it is of disadvantage when the tongue is too red and clean and has fissures. After correcting these conditions,

the oil is often well borne and beneficial. The hypophosphites and phosphorus receive a good share of attention in the discussion; and the writer urges the point, that from his own experience, as well as that of many others, to be assimilated, the phosphorus combinations *must be derived from animal or vegetable sources*. Phosphorus in these forms may be administered by feeding on the whole flour of wheat (i. e., unbolted), and by the exhibition of glycerite of kephaline. Extract of malt is highly esteemed for its properties of assisting digestive processes by converting starchy matter into glucose and emulsifying fats and oils. The writer strongly argues, that by the judicious use of these remedies, and some that space forbids us to notice, as auxiliaries, better results are obtainable than our statistics at present show.

Effect on Women of Imperfect Sexual Hygiene.—(Dr. Chas. Fayette Taylor, in *American Jour. of Obstet. and Diseases of Women and Children*, Jan. 1882). The writer, after a very clear exposition of the sexual functions of the female and their relations to the opposite sex at the various stages of growth, maturity and decline, argues that many of the invalids among the unmarried women, especially those of the highest and most refined class, have been ruined in health, and often in mind, by *disuse* of the sexual organs. He states that in many instances the subjects are entirely ignorant of the cause and even of the nature of the erotic sensations—all such ideas and influences having been, by education and training, methodically repressed from infancy. Many form the habit of masturbation, and are thus undermined in health. Marriage, he thinks, where it is practicable, will often cure, as will careful direction of the mind from self to external subjects, by books, travel, etc.; and he lays especial stress upon good, active, muscular *exertion*.

Antiseptic Midwifery and Septicæmia in Midwifery.—(*Amer. Jour. Obstet. and Dis. Women and Children*, Jan. 1882). Dr. Robert Barnes, St. George's Hospital, London, after discussing this subject, summarizes his conclusions thus:

1. Keep the door shut against the enemy by maintaining contraction of the uterus.
2. Prevent the enemy from forming and collecting, by irrigating the parturient canal by antiseptic fluids.
3. Eject the enemy as fast as he effects an entry; that is, keep the excretory organs in activity.

4. Guard the lying-in chamber against the approach of foreign poisons.

5. Fortify the patient against the attack of the enemy by keeping up due supplies of wholesome food.

Communicability of Tuberculosis.—Dr. Tappenheimer, of Meran, 1877, proved by experiment that the inhalation of tuberculous sputa, dried and finely divided, invariably caused the disease in previously healthy dogs. Since then, this gentleman has proved that dogs fed on food mixed with tuberculous matter remained healthy, except where there was some abrasion of the digestive tract, in which inoculation took place. Rabbits having the disease were confined in boxes in such a manner that the air expelled from their lungs in coughing was inhaled by healthy ones, but the disease was not communicated. It is thought, however, that where the expectorations are allowed to dry, and thus to form part of the dust of apartments, there is liability to the disease being contracted by healthy persons.—*Sanitary News*, December, 1881.

Small-Pox—Its Treatment.—By J. Fasher, M. D., Chicago, Ill. The writer says that his treatment is symptomatic; that he gives a cathartic if there is constipation, or, if there is nausea and occasional vomiting with the tongue heavily coated at the base, an emetic. Then he uses aconite or veratrum to keep down the temperature. Aconite is preferred for children. Gelseminum is given if there are a flushed face, suffused eyes, great nervous excitement, with a tendency to convulsions. Belladonna, when the patient is dull, constantly dozing, and the eruption is tardy; jaborandi, when the skin is hot and dry, with a full, bounding pulse. After the decline of the initial fever, he relies mostly upon the eliminatives, chiefly acetate of potassa, of which he gives about one drachm daily in sufficient water to make a pleasant drink. The sedatives he keeps up in small doses. Everything is kept clean and the body sponged occasionally. About the ninth day, when the secondary fever sets in, he begins to use antiseptics and tonics—salicylic acid, salicylate of soda, chlorate potash, dilute muriatic acid, sulphate of quinia and muriated tincture of iron. Wine and beef tea are to be used as indicated. Diet should be digestible and nutritious. Chlorate of potash and carbolic acid gargle will generally relieve the sore throat. A dark room and the application of olive oil with a "few minims" of carbolic acid to the

ounce, will prevent pitting.—*Chicago Med. Times*, Dec. 1881.

Ultra-Quinine—A New Alkaloid from Cinchona.—This base has recently been separated by W. Geo. Whiffen, and receives its name from its action on polarized light, which it rotates to the left more powerfully than does the sulphate of quinia. There have, as yet, been no attempt to locate it therapeutically. It was obtained from a variety of the bark known as *cinchona cuprea*, and only in small quantities, from one to eight per cent. It is very soluble in alcohol, even when dilute; when freshly prepared it is soluble in ether, and considerably so in dilute liquid ammonia. It is rather more soluble in cold water than sulphate of quinia. It is strongly alkaline to litmus.

[Should any of the salts of this alkaloid be found, upon investigation, to possess antiperiodic properties, its solubility in *ammonia solution* may render it extremely useful for subcutaneous injection in congestive chills, etc., as this solvent would be much less likely to cause abscess, and would possess the additional advantage of furnishing a prompt stimulant, so necessary in these cases.—J. M.]—*Pharm. Journal—Oil and Drug News*.

Incompatibility of Chlorate of Potassium and Iodide of Potassium.—Although these salts do not react upon each other in solution, yet in the stomach they do, forming the *iodate of potassium*, which is *poisonous*.—*Oil and Drug News*, Jan. 1882.

Significance of Facial Hairy Growths Among Insane Women.—Dr. Allan McLane Hamilton, of New York city, contributes to the *Transactions of the Medical Society of the State of New York*, for 1881, a very interesting paper. While we have noticed that many of the insane in our asylums have “facial hairy growths,” we have, at the same time, in our mind’s eye, many cases who are still in their uterine functional activity, and yet manifest no sign of mental aberration or insanity. But we have such confidence in the truth of the full statements of Dr. Hamilton, and his remarks are so suggestive as to a further study of the subject, that we give his paper almost entire, simply correcting what we observe as typographical errors:

The significance of alteration in the growth of hair, and the condition of the skin and its appendages, have attracted the attention of many modern observers; and it has come to be generally acknowledged, that such appearances have

more than ordinary import as symptoms of nervous diseases. It is not uncommon to find hair upon the faces of women, though, when discovered, it is not in any considerable quantity, and is the indication, as a rule, of a tendency towards masculinity or the arrival at that age when uterine and ovarian functions have ceased. It cannot be denied that when such growths take place in young women, in localities where hair does not usually grow, they are suggestive of some pathological process which may naturally be supposed to involve the sympathetic nervous system. Fabre* has quite lately drawn attention to the production of very striking hair-changes in consequence of various mental states in women, and other observers allude, at length, to the excessive growth of hair in paralyzed parts. Fabre refers to several instances. In one the patient was a mother who had suffered great mental anguish through the loss of a child. Another woman, who suffered from a uterine disease complicated by nervous symptoms, lost all her hair, but it returned as rapidly and grew vigorously under the use of appropriate treatment.

The appearance of hair, slight though it may be, is, I think, an inevitable result of an overactive and continuous exercise of functions of the uterus and ovaries, and is but part of the process which in the early stages of pregnancy is expressed by deposition of pigment in various places, by the bronzing of the skin, and the lively excitement of the organic nervous system. Kaposi† mentions the liability of women who have borne children to hairy facial growths, but believes that the appearance of hair upon the chin is found more often after the climacteric period than at any other time.

Enough is shown by the meagre literature of the subject to prove that there is a very close connection between the irregular or excessive performance of the functions of the female pelvic organs, and the phenomena of cutaneous malnutrition; and moreover, that when their innervation is taxed, some peculiar exhibition of disordered vaso-motor function occurs in a remote part. My own experience leads me to divide the subjects of abnormal hairy growths into two groups:

1. Those in whom trophic cutaneous changes, such as acne, depositions of pigment, lesions of the nails, or hangnails, as well as slight hairy growths, occur in young women in connection with ovarian irritation, and with mental trouble or emotional disturbance evidenced by melancholia, and per-

*Les Relations Pathogenique des Troubles Nerveux. Paris, 1880. P. 513.

†Hebra: New Sydenham Society's Transactions, p. 69.

verted moral sense—the altered sexual state being often connected with masturbation.

2. Those cases in which prolonged vaso-motor changes have existed, and in which uterine and ovarian function have disappeared.

In such cases the unlooked for development of hair may occasionally appear, and its site, time of growth, and character may suggest its pathological character. Ollivier reports the case of a young woman of fair, soft skin, who, after an attack of typhoid, presented a curious appearance. The skin became rough, and a general growth of fine black hair took place all over the body. From time to time I have seen insane women who were the possessors of beards or growths of hair. Some of these cases—in fact most of them—presented some history of sexual trouble, and in nearly every instance the growth of hair was coincident with the development of mental diseases. In the beginning I was not prepared to attach much importance to the existence of beard or patches of hair upon the face; but lately I have been inclined to view the peculiar appearance and connection of this condition with others which I am convinced play as important a part, when they exist, as the condition of the hair of the insane mentioned by Bucknill and Tuke* and Darwin.† Godfrey‡ has observed the abnormal growth of hair upon the face of idiots and epileptics. A patient consulted him whose mother was insane; the patient had one sister in a lunatic asylum, “another nearly raving with neuralgia, and she herself epileptic. She was but thirty years of age, and grew a famous moustache and beard.”

During one of my visits to the Hudson River State Hospital for the Insane, I was shown a woman of middle age, upon whose chin an extraordinary growth of hair was visible—such growth having made its appearance since the development of her insanity. The subsequent discovery of other cases suggested to me that this condition of affairs might exist elsewhere, and I afterwards made, with the kind assistance of Dr. Livingston and Hinckley of the resident staff, a careful search among the insane women at the Blackwell's Island Lunatic Asylum, and found many others. It will not be amiss to briefly allude to the history of several of these patients.

*Manual of Psychologial Medicine, third edition, p. 432.

†Expression of the Emotions, p. 297.

‡Diseases of the Hair, p. 31.

CASE I.—Johanna G——, Westchester county, admitted to the Hudson River State Hospital for the Insane, February 22, 1879; forty years of age; housekeeper; married; four children; good habits; common education; German. Patient was brought by the superintendent of the poor, who knew but little of her case. Was supposed by him to have been insane but two weeks. Said she was the daughter of Christ. Neglected her family; prayed much and out of season; took food and slept irregularly, but was quiet and easily managed. General strength fair.

February 23.—Wanders through the ward, whispering in German; was noisy last night; ordered chloral, 5 ss (gm. 2.) tr. hyoscyam 5ij (cc. 7. 4) nightly. No special change till the morning of March 3d, when she became suddenly very destructive; tore up, in the course of fifteen minutes, eight pillows; then became as before—not noisy, but talked continually in a low voice to herself.

April 10th.—Refuses all medicine. Sleeps but little at night, but is not noisy.

May 2d.—At times is noisy. Stoops down to the floor and converses with imaginary persons, spirits, etc. *Quite a beard has grown on chin since her admission*; had a few short hairs then, but these have very greatly increased in numbers and length. Says she has had hair on her face during the past four years, but not previous to this. Menstruates regularly. No special change has occurred in her mental or physical condition for many months, or, indeed, since admission. Occasionally will be noisy. Talks to, and gesticulates at imaginary persons almost continually. Resists all treatment.

The above notes were taken by Dr. C. H. Langdon, who assisted me materially in my examination.

Mrs. G. is a spare woman of medium height, of decidedly disagreeable personal appearance, much of which is due to a long moustache and two or three peculiar tufts of wiry black hair which drop from the chin. There are tufts of considerable thickness on the left side, which I have seen upon two occasions, and find to have grown more than half an inch (13 mm.) in three months. The skin is the seat of discoloration. There are "bronze spots" on left temple and chest. Both sides contain spots of pigment; the left, however, more than the right. There is no difference in the size of the mammary or other glands, but the left nipple is, if anything, more prominent than the right. The left side is cooler than the right. Dr. Langdon took a number of surface-temperature observations, and the average is as follows:

	Right Side.	Left Side.
Face.....	99° F.	98° F.
Ovary.....	99°	100°
Palm of hand.....	99°	90°

The right axillary temperature was $98\frac{1}{2}^{\circ}$, the left $98\frac{2}{5}^{\circ}$. The nails of both hands, but especially left, were crenated and irregular in growth, and there were hang-nails. There was, if anything, a slight increase of size of the left side, the various circumferential measurements giving a difference of from one-half to one inch (13 mm. to 25 mm.) in favor of the left side. Uterine examination revealed a very small uterus. The growth of hair upon the pubes was normal, but slightly thicker on the *right* side. The new growth of hair was wiry, black and extremely dense in places. Heart-sounds normal.

CASE II.—Nancy S——, *dementia*, colored, forty-five years of age, chronic mania. Admitted to the Hudson River State Hospital for the Insane, December 8, 1877. Has had no children. She has not menstruated since admission (present date August, 1880). The patient has irregular tufts of hair upon her chin and just anterior to ears, upon both sides. She has a slight moustache. The hair is longer upon the right side, and it is of active growth and quite wiry and black. The temperature of the left side of the body is lower than the right. Her hair-growth began with her insanity. She is often violent and destructive, and will not permit physical examination.

CASE III.—Sarah H——, forty-five years of age. Admitted to the Hudson River State Hospital for the Insane, September 23, 1879. Prostitute. Syphilitic insanity, followed by dementia; duration two years. Patient has goitre of recent growth, which is larger on right side than on left. Marked tufts of hair upon upper lip, chin and sides of face. The growth is of comparatively recent date, and is about one and one-half inch (38 mm.) long. Lowered temperature on left side. Has bronzed spots upon body, and general mottling. There is no heart trouble. She has not menstruated since her admission.

CASE IV.—Sarah Ann S——, admitted to the Hudson River State Hospital for the Insane, February 16, 1878; aged thirty-two years. Mother's mother insane; insane three years; acute mania, followed by dementia. Has had two children. Separated from husband. This patient has abundant beard and moustache of light color, which appeared with commencement of insanity, and since has grown to a

considerable length, the beard being nearly two inches (51 mm.) in length. She has menstruated regularly. The growth is very marked on the left side. The eyebrow of the same side is much heavier and the eyelashes are perceptibly larger. The left iris contains spots of pigment, which are absent on the other side. The surface-temperature is lower on the left side. The nails are crenated and horny. Small anginoma are found scattered over the left side of the body, and these are about the size of a large pin head and confined to the upper part of the trunk. There is slight thyroid enlargement, but no heart-murmur. The left breast seems larger than the right.

At Blackwell's Island, * * * * with the assistance of Dr. Hinckley, I found several women who presented appearances resembling in every respect those already mentioned. Most of these cases were well advanced in life, and the hairy growth had not the significance it would have had in younger women; still the excessive length of the beard of these women, the luxuriance of the hair and its preponderance upon one side, gave it a different appearance from that usually found in old women. In two of these cases the beard began at an early age, and was quite dense. An unmarried woman was thirty-nine years old, and her insanity began twenty-four years before, in melancholia, which developed into mania, and she subsequently became demented. The hairy growth began ten years ago, and is quite dense and longer on the right side. It has changed color within the past two or three years, the original color having been brown. It now contains tufts of gray. There are many moles scattered on body, but particularly on right side, and some bronzing. A second case, thirty-seven years old when seen. Her trouble began ten years ago as mania, followed by dementia. Unmarried. She possesses a moustache most abundant upon the left side, and a collection of stiff, long, black hairs upon the chin.

Of four other women in whom the diagnosis of dementia was made, the beard was longer and more dense on the right side in three; in the other, it preponderated on the left side. In one case, the growth was white, with sharply defined patches of black. In another case, there was a small displaced uterus. In two others, there was dysmenorrhœa. In all, there were spots of skin-discoloration and angioma; the hair of the head was abundant and coarse; the temperature was lowest upon the side where the hair was most developed.

Arnozan* refers to the rapid development of hair as a result of various nerve-lesions, and says traumatic neuritis is most apt to be followed by hairy growths, which disappear when the neuritis is cured. As a very rare accompaniment of paralysis it is occasionally the case that a dense growth of hair makes its appearance in paralyzed parts. Such a case is detailed by Jelly,† the patient being a young Spaniard, eighteen years of age, who, after a fall, suffered from complete paralysis, commencing at the last dorsal vertebra. Coincident with the paraplegia, his body below the point of injury became the seat of a hairy growth, which extended about the nates and down the legs to the ankles. In some places it grew to such a length that it could be readily curled. I have seen cases of paralysis in which the hairy growth occurred in places which were the seat of trophic paralysis; and cases of infantile paralysis, in which the limbs were covered by an active growth of new hair, have been observed. Buchner,‡ in speaking of baldness of nervous origin, refers to the trigeminal and occipital nerves as those involved in cases of abnormal hair change, and Virchow is disposed to assign the pathological seat of facial hairy growths to the trigeminus—a conclusion he came to after his investigation of the celebrated Ava cases, in which two men and a woman were the subjects—the dense and peculiar growth of hair being confined to the face and neck.

From the foregoing, and from a consideration of the well-established fact that mental shock and the influence of powerful emotions are productive of trophic degeneration and loss of hair, it may be assumed that diminution of innervation is apt to be followed by trophic alteration, evinced either by the loss or increase of hair; that disorders of the fifth nerve are connected with such changes; and that the condition is one of a neuro-pathological character, there can be little doubt. This is still further borne out by the circumstance that, in cases of migraine connected with cerebral functional alteration, the trigeminal neuralgia not unfrequently results in external vaso-motor changes of the most varying description.

Of course the remote pathology must be considered from a purely theoretical, and, consequently, unsatisfactory stand-

*Des lésions trophiques aux maladies du système nerveux. Paris, 1880. Pp. 155, 156.

†British Medical Journal, January 14, 1873, p. 671.

‡Kritische Bemerkungen zur Ätiologie der Area celsi. Virchow's Archiv, vol. lxxiv., p. 527, 1878.

point. It would appear that the normal balance between the cerebro-spinal filaments and those belonging to the sympathetic system concerned in the control of vessels engaged in nutrition, was lost in such cases, and that the energy, before expended in the innervation of the pelvic organs, was directed in a new channel. Dr. Emmet, in his work upon Diseases of Women, makes the statement that those women in whom normal uterine innervation is not exercised, are usually those who suffer from new growths of various kinds. The same reasoning might apply in the case of peripheral disorder, such as that which forms the subject of the paper I have just read.

A consideration of the cases to which I have alluded, I think, will show that:

(1.) Abnormal growth of hair, especially upon the face, is frequently closely connected with disturbed function of the pelvic organs of women.

(2.) That in the insanity of women, especially when it lapses into dementia, and cutaneous nutritive changes exist, such growths of hair are by no means of uncommon appearance.

(3.) That their unilateral character, so far as preponderance in growth is concerned, and their association with unilateral cutaneous lesions, such as bronzing and nail-changes, indicate their nervous origin.

(4.) Their appearance chiefly upon the face of insane patients, and relation to trophic disorders incident to facial neuralgia, point to the fifth nerve as that concerned in the pathological process.

(5.) The development of hair, with the deposit of pigment and skin lesions, and occasional goitrous swellings, suggest the inference that the neuro-pathological process which leads to the growth of hair in the chronic insane, is akin to that which gives rise to Addison's disease.

As I have said, there are many cases which do not impress us because they include women of advanced age. These I exclude altogether, but I shall be satisfied if I succeed in convincing my hearers that when any considerable growth of hair occurs upon the face of female insane patients, it is indicative of an unfavorable form of insanity, and such, especially, is the case in those women who have not reached middle age.

Prescription for Membranous Dysmenorrhœa.—Dr. Wm. H. Mussey, of Cincinnati, Ohio, in the *Transactions of the Ohio*

Medical Society, 1879, gives the following prescription for membranous dysmenorrhœa, which we have once before published, but which we are requested to republish :

R. Pulveris guaiaci resinæ.
 Terebenthinæ Canadensis.....^{aa} ʒi.
 Olei sassafras.....f. ʒij.
 Alcoholis.....f. ʒviij.

Mix. Macerate for seven days and strain.

Then add—

Hydrargyri chloridi corrosivi.....ʒj.

Sign: Take twenty drops in wine or sweetened water, night and morning.

Writer's Cramp.—M. Wolf (*Le Progres Medical*, 1882, No. 3) has earned a considerable reputation by his success in the treatment of this class of affections. His system consists in a combination of gymnastics and massage. He makes his patients execute movements in all directions with the affected hand for a half an hour to an hour and a half at a time, three or four times a day; and, in addition, the muscles involved are stretched more or less forcibly three or four hundred times daily. He also uses massage and friction, and attaches considerable importance to percussing the affected muscles. The most essential part is the extension of the spasmodic muscles.—*Alienist and Neurologist*, April.

Book Notices, &c.

System of Surgery, Theoretical and Practical, in Treatises by Various Authors.—Edited by T. HOLMES, M. A., Contab., Surgeon and Lecturer on Surgery at St. George's Hospital, etc. First American, from Second English Edition. Thoroughly Revised and much Enlarged by JOHN H. PACKARD, A. M., M. D., Surgeon to Episcopal and St. Joseph Hospitals, Philadelphia, assisted by a Large Corps of the Most Eminent American Surgeons. In Three Volumes, with Many Illustrations. Volumes II. and III. Philadelphia: Henry C. Lea's Son & Co. 1882. Royal 8vo. Vol. II., pp. 1063; Vol. III., pp. 1059. (From Publishers.)

Vol. II. of this almost invaluable "System of Surgery," has, for its American Revisers, Drs. John C. Harlan, Chas. H. Burnett, J. Solis Cohen, J. Wm. White, James Truman, J. H. C. Simes, John H. Packard, of Philadelphia; Charles McBurney, Lewis A. Stimson, Edward L. Keyes, A. J. C. Skene, of New York; and Samuel C. Busey, of Washington. Vol. III. has, for its American Revisers, Drs. J. Solis

Cohen, Roberts Bartholow, Charles T. Hunter, John H. Packard, Thomas G. Morton, Arthur Van Harlingen, Joseph Leidy, Samuel Ashhurst, of Philadelphia; Thomas M. Markoe, of New York; E. H. Bradford, Norton Folsom, Boston; P. S. Connor, Cincinnati, O.; J. C. Reeve, Dayton, O.; Hunter McGuire, Richmond, Va.; and Theodore A. M'Graw, of Detroit, Mich. These are all eminent men in the American profession. But the partiality of the American Editor for his personal associates has led him to be less general in the bestowal of his compliments, as to representative men of the United States, than would be best for a book claiming to be revised by "Americans." Of the 25 American Revisers, 13 are from Philadelphia city, 5 from New York State, 2 from Boston city, 2 from Ohio State, 1 from Washington, D. C., 1 from Detroit, Mich., and only 1 from the South—Dr. Hunter McGuire, of this city. Thus it appears that over a half of the *American* revisers are from one city of the entire Union—Philadelphia. There are many truly great surgical authors in the South and West of more eminence than some of the "revisers" selected from the Philadelphia profession; and a selection of some of them as revisers would have given this American Edition more of a national or representative character than it now possesses. But having said this much, we have said the worst that we can against this most excellent treatise.

"Holmes' Surgery," as the original edition is familiarly known to the profession, has established for itself a reputation which is unequalled by any publication of the present day. Either for the practitioner, or as a student's consultation work, this American edition is most excellent, and is unrivaled. The annotations or amendments made by the American revisers admirably suit the "System" to the real wants of the profession of this country. Of course we cannot, in the short space that we have to devote to any book notice, attempt a review of these two immense volumes; nor, indeed, have we read *all* the articles critically, but we have examined most of them. There is no better chapter or section in the entire three volumes of the "System" than Part IV of Vol. III, which treats of "Gunshot Wounds," prepared by Thomas Longmore, C. B., F. R. C. S., which has been revised by Dr. Hunter McGuire, M. D., of Richmond, Va., whose opportunities and experience during the civil war of the United States, as the chief medical officer of "Stonewall" Jackson's Army Corps, have been scarcely excelled by any military surgeon. His suggestions regard-

ing treatment of wounds of the abdomen, if they were all, would give his name a world-wide reputation as an author of special eminence. The several chapters by Dr. John H. Packard, of Philadelphia—the American editor of the work—all manifest great ability and much experience as a surgeon. Dr. J. C. Reeves, of Dayton, O., adds some very practical remarks to the chapter by Joseph Lister, Esq., on anæsthetics. Prof. Theodore A. M'Graw, of Detroit, makes valuable revisions of the section on “diseases of the breast, by J. Burkett, Esq.” Dr. Lewis A. Stimson, of New York city, has added greatly to the value of the chapter in Vol. II, on “diseases of the veins.” Dr. Samuel C. Busey, of Washington, D. C., introduces, in reality, a new chapter on “injuries and diseases of the absorbent system,” which chapter is a re-statement, in brief, of the facts contained in his instructive essay of a few years ago on a like subject. Dr. Edward L. Keyes, of New York city, has made several practical suggestions in his revision of the section on “diseases of the urinary organs,” prepared for the English edition by the illustrious Sir Henry Thompson. And thus we might refer, in approbation of the revisions made by many other Americans, which greatly add to the merits of the English edition, which original English edition has for years become well known to the profession generally, and is everywhere regarded as authoritative. Every practitioner should have this book. No practical surgeon can well afford to be without this “System of Surgery.” We wish we had the space to say more in detail regarding the present edition, so as to prove its great importance to our readers. We will only add, that by the references we have made to the revisors of certain sections, we have intended no invidious distinction as between them and others that we have not named.

The volumes, as sent us, are handsomely issued, and each one is thoroughly indexed, which greatly facilitates ready reference to any subject treated of in the respective volumes.

Transactions of the American Medical Association. 1881. Vol. XXXII.—JOHN J. WOODWARD, M. D., U. S. Army, Washington, D. C., President; WM. B. ATKINSON, M. D., Philadelphia, Secretary; WM. LEE, M. D., Washington, D. C., Librarian. 8vo. Pp. 684.

The “Daily Edition” of the *Virginia Medical Monthly*, published such full reports of the proceedings of the General Sessions, as well as of the Sections, during the days of the meeting in Richmond last May, that it is hardly neces-

sary for us to say anything about the present volume. It is issued in the usual excellent style for which the Secretary as well as the publishers are known to do their work. No paper in the volume has attracted more general attention and met with more approval, after able criticisms, than that by Dr. Hunter McGuire, of this city—one of the present Vice-Presidents of the Association—his subject being “Operative Interference in Gunshot Wounds of the Peritoneum.” Dr. Wm. C. Dabney, of Charlottesville, also contributed a paper of marked ability on the “Nature and Treatment of Pneumonia.” Dr. James L. Cabell, of the University of Virginia, presented an exhaustive and highly instructive paper on the “National Board of Health and the International Sanitary Conference of Washington.” Dr. J. N. Upshur, of Richmond, contributes a report of a rare “Case of Paralysis of Motion of Both Upper Extremities.” None of these four papers from members of the Medical Society of Virginia is of secondary importance, as compared with the great bulk of articles annually appearing in the *Transactions*.

Other papers to which we would call special attention as to merit, besides the President’s Address (Dr. Hodgen, of St. Louis), are those by Drs. Chisolm, of Baltimore; Stewart, of New York city; Reynolds, of Louisville; Warren, of Boston; Cole, of San Francisco; Billings, of U. S. Army; Allan, of W. Va.; Watson, of Jersey City, N. J., and Byrd, of Quincy, Ill. We wish we had the space to name even the titles of the several papers by those authors.

We would prefer, of course, to refresh the memory of our readers by brief synopses of these and two or three others, but we cannot do so now, on account of our already overcrowded columns—so far, at least, as relates to this department of the *Medical Monthly*. Fifteen States were represented by thirty-one authors of papers in this volume.

Transactions of the Medical Society of the State of New York.

1881. 8vo. Pp. 495.—A. JACOBI, M. D., President; WM. MANLIUS SMITH, 7 Myers’ Block, Syracuse, N. Y., Secretary.

In addition to the number of pages named above, there are 14 which relate to the laws of New York State concerning medical matters. There are, beside these, 6 pages of Index matter—making a volume of 515 pages in all. The volume is handsomely issued—bound in cambric; and the merit of the articles contained in it is proven by the many extracts which have, from time to time, been excerpted from

its pages by the leading medical journals of the country. We must satisfy ourselves with a lengthy selection, in the proper department, of an article or paper by Dr. A. McLane Hamilton. We regret we cannot allow more room for a fuller notice of these excellent Transactions.

Home and Climatic Treatment of Consumption on the Basis of Modern Doctrines.—By J. HILARD TYNSDALE, M. D., late Physician in Charge Rocky Mountain Sanitarium for Consumption at Maniton, Colorado, etc. New York: Berimingham & Co. 1882. 12mo. Pp. 174. Price, cloth, 50 cents. (From Publishers.)

This is a very readable book, and in much of its details is instructive. Its price, too, brings it within the reach of all interested in the subject. Perhaps the author gives relatively too much space to foreign "health resorts," when it comparatively rarely happens in this section that the victims of consumption possess the means to take foreign tours. We have long since come to the conclusion that in this section of country, at least, the chief cause of consumption may be attributed to poverty—poverty which does not allow those with the premonitory signs of the disease to have properly ventilated houses in properly located portions of the city, nor sufficient diet of the right kind, nor to purchase the medicines indicated, nor to seek recreations as required, and hence be cheerful, etc. But the little manual before us gives a great many suggestions incidentally relating to these very points, which may be read with profit by the profession as well as laity.

An Index of Surgery.—By C. B. KEETLEY, F. R. C. S., Senior Assistant Surgeon to the West London Hospital, etc. New York: Wm. Wood & Co. 1882. 8v. Pp. 320. (For sale by Messrs. West, Johnston & Co., Richmond.)

This book claims to be a "concise classification of the main facts and theories of surgery for the use of sanior students and others." We have examined the book with reference to a few special subjects; and we have been more than pleased with it. It is, as its title indicates, "an index;" hence, it is not apt to be read, through and through, by anybody. Yet, every one who has need for hasty references to surgical questions will find valuable aid by keeping this as a book for quick consultation. It is a lengthy *dictionary* of surgical subjects, and the advices given as to definition, symptoms, prognosis and treatment are all worthy of considera-

tion, so far as we have examined the work. As a "dictionary work"—or, preferably, to use the title, as "An Index"—each subject is arranged alphabetically, from the beginning to the end of the book. To illustrate, the work devotes about a page to the subject of "Abdomen, Contusions of." Under this head, we find mention, as possible consequences to look for, of such injuries as "rupture of the liver," "rupture of the gall bladder," "rupture of the stomach," etc. Our chief complaint of the work is that there is not appended a good index, so as to aid hasty reference. We say this because we find no mention, in the index appended, to many organs or diseases that would greatly assist one who is hastily in search of good surgical advice. For instance, suppose one had a surgical disease or injury of the stomach, he would naturally look for the word "stomach;" but this word is not to be found in its proper alphabetical arrangement—either in the body of the book nor in the appended index. Thus, the physician or surgeon, in haste to seek consultation, would lose the value of reference to the volume. This we acknowledge to be a small criticism, but, nevertheless, it is one which, if properly heeded, will lend greatly to the popularity of this book.

Third Annual Report of the State Board of Health of Illinois, with the Official Register of Physicians and Midwives. 1880.

HORACE WARDNER, M. D., Anna, Ill., *President*; JOHN H. RAUCH, M. D., Chicago, Ill., *Secretary*. 8vo. Paper. Pp. 268. (By mail.)

Although this volume is the one for 1880, we are advised that the "register of physicians and midwives" is revised to December 20, 1881. We wish every citizen of States that have no State Board of Health could examine this "Report." The general interest to the public of the questions considered, and the intrinsic worth of each article contributed to the book would serve to persuade readers of the utility of such a Board in every State. Such organizations ought, of course, to be stripped of any idea of political preferment. Each member of the Board should be selected on account of his professional ability.

We have not the room to notice this "Report" in detail. We observe, however, in the table opposite page forty-six, "showing the courses of study, fees and requirements of the medical colleges whose diplomas are recognized by the Board," that, of the forty-five regular medical colleges "recognized," the diploma of the Medical College of Virginia is not even listed. The diploma of the University of Virginia

is recognized. The omission of mention of the Medical College of Virginia we trust is simply an oversight.

Materia Medica and Therapeutics. Inorganic Substances.

By CHARLES D. F. PHILLIPS, M. D., Late Lecturer on Materia Medica and Therapeutics at Westminster Hospital Medical School. Edited and Adapted to the U. S. Pharmacopœia. By LAURENCE JOHNSON, A. M., M. D., Lecturer on Medical Botany Medical Department of the University of City of New York, etc. Vol. I. New York: Wm. Wood & Co. 1882. 8vo. Pp. 298. (For sale by Messrs. West, Johnston & Co., Richmond.)

This is a very valuable book. It is, in reality, a continuation of the "Materia Medica," etc., by Dr. Phillips—the first part of which treated of the "vegetable kingdom." This volume is the first of the series relating to medicinal "Inorganic Substances." The work is especially valuable in its references to the therapeutical application of drugs. It is a volume of useful importance to practitioners, as it is also one of instruction for students. No doctor would go wrong in adding the book to his library.

Manual of Diseases of the Skin. By L. DUNCAN BULKLEY, A. M., M. D., Attending Physician for Skin and Venereal Diseases at the New York Hospital. New York: G. P. Putnam's Sons. 1882. 12mo. Pp. 312. (For sale by Messrs. West, Johnston & Co., Richmond.)

This is an excellent work—both interesting in its style and instructive in its matter. There are few writers of science who more concisely and yet satisfactorily state the important points of a subject. This book gives an analysis of 8,000 consecutive cases of skin diseases, and, in addition, a formulary of important or useful prescriptions. This "Manual" is thoroughly practical in all its teachings, and is written from a clinical standpoint.

Incidental Effects of Drugs. By Dr. L. LEWIN, Assistant at Pharmacological Institute of the University of Berlin. Translated by W. T. ALEXANDER, M. D., New York. 1882. 8vo. Pp. 239. (For sale by Messrs. West, Johnston & Co., Richmond.)

The distinguished character of the author gives his book at once prominence that will make it a standard. It treats of something like the "odds and ends," but exactly such "odds and ends" as every doctor wishes to be better informed about than he is, after reading systematic works. It refers mostly to the accidental or unusual effects that sometimes result from legitimate or, at least, not excessive doses

of various drugs. A great deal of instruction may be derived from a studious reading of the book, as also many valuable suggestions. The volume is to be unreservedly commended to the favorable notice of the medical profession.

Memoranda of Physiology. By HENRY ASHBY, M. D., (Lond.) Physician to Geneva Hospital for Sick Children, Manchester, etc. Third Edition, thoroughly Revised, with Additions and Corrections by an American Editor. New York: William Wood & Co. 1882. 24mo. Pp. 329—xii. (By mail from Publishers.)

There is *much* "in a name." Dr. Ashby himself is prominent enough as a medical authority to warrant the prediction that whatever he publishes will be eagerly sought. At the same time, there are some active practitioners who, in search of well-chosen libraries, if they did not know of the eminence of Dr. Ashby, would scarcely purchase a book with the title "Memoranda." We make this remark because, having carefully examined the book, we find it exactly what its title claims for the nature of its contents.

Pocket-Book of Physical Diagnosis. By Dr. EDWARD T. BRUEN, Demonstrator of Clinical Medicine, and Lecturer on Pathology of the Urine, University of Pennsylvania, etc. With Wood Engravings. Philadelphia: Presley Blakiston. 1881. 12mo. Pp. 256. Price, \$2. (For sale by Messrs. Beckwith & Parham, Richmond.)

This is a very useful book to assist one in making physical diagnoses of cases that would be doubtful as to their nature were symptoms alone to be depended upon. The application of the physical signs is limited in this book almost exclusively to diseases of the thorax. We wish the author had taken a wider field; for the practitioner often needs instruction regarding physical diagnosis of diseases of abdomen and other parts of the body. We hope that a second edition will soon be called for by the exhaustion of the present; and then we hope to find a larger range of subjects discussed than are now referred to in the book. A well-arranged Index is appended to the book.

Study of Tumors of the Bladder, with Original Contributions and Drawings. By ALEX. W. STEIN, M. D., Surgeon to Charity Hospital, Genito-Urinary and Venereal Division, etc. New York: Wm. Wood & Co. 1881. 8vo. Pp. 94. (From Publishers.)

This is a useful contribution to surgery of the bladder. Although the author claims to have had but four cases of

bladder tumors, the loss of two was due to cancer of the bladder. As to the other two, they were only temporarily under observation. We do not advise *all* of our doctor friends to buy the work; but every one should keep it in memory. Dr. Stein has given a careful consideration to the subject; and if any practitioner at any time should have occasion to think he has a case of some sort of tumor of the bladder, then let him order the book at once for the sake of consultation. From what we have said, of course we would recommend to those not "pushed for cash," to add this book at once to their library—books for reference when occasion may require it—which occasion may sometimes come suddenly, as when called in consultation.

So useful do we consider this book in special cases, that we make a willing sacrifice to report the following conclusions in full:

"1st. In a few remarkable instances in the cases of women, apparent recovery seems to have resulted from a spontaneous expulsion of growth from the bladder. But, in general, it may be said that tumors of the bladder, if uninterfered with, are inevitably fatal. And, although they may exist for several years without creating much distress, a fatal termination almost invariably ensues in a few weeks or months from the outbreak of active symptoms.

2d. Death results more frequently from hæmorrhage, and from the effects of mechanical obstructions to the outflow of urine. Hence, the indication would be to remove the growth while the general condition of the patient is yet favorable for an operation; before the subject has become exhausted from loss of blood, or the kidneys and bladder have become so much diseased as to make recovery impossible, even in the event of the successful extirpation of the growth.

3d. In women, because of the accessibility of the bladder to direct exploration, there is no excuse for temporizing, and the surgeon should lose no time in acquiring an exact knowledge as to the existence, nature, etc., of the tumor, and, if practicable, attempt its removal as early as possible.

4th. The result thus far attained by surgical interference, in the cases of women, could scarcely be more satisfactory, and excepting one instance in which the bladder was accidentally perforated, it does not appear that the fatal termination was precipitated by the operation in any of the cases.

5th. In the male, the propriety of operative interference must necessarily always be a more serious question; because of the occasional uncertainty of diagnosis, and because of the

gravity of the undertaking necessary for the removal of the growth. Nevertheless, the results thus far attained by operations, are more encouraging and in every way justify a repetition of the same.

6th. From a number of autopsies made, we learn that the successful operations might have been multiplied, first, in those cases in which no operation was attempted, although the growths could have been easily removed, and with apparently every prospect of success; and again in those in which the operation was too long deferred and which, it is reasonable to assume, would have terminated successfully, had the same been undertaken at an earlier period.

7th. Given a positive diagnosis of tumor, the absence of severe secondary symptoms should be no excuse for deferring the operation. On the contrary, the earlier the growth is removed the better the prospects of complete recovery. With a healthy bladder and kidneys, cystotomy is not so dangerous an operation as to warrant any delay.

8th. Evidence strongly pointing to the existence of a tumor with severe catarrhal symptoms, or with spasm of the bladder and much suffering, will often justify an operation; for if a tumor is found, its extirpation will afford the only chance for life; and if no growth exists, or if the bladder is occupied by an irremovable cancer, the cystotomy may, at least, afford temporary relief from suffering.

Landmarks, Medical and Surgical.—By LUTHER HOLDEN, Consulting Surgeon to St. Bartholomew's and the Foundling Hospital, etc. Assisted by JAMES SHUTER, M. A., Camb., F. R. C. S., late Assistant Demonstrator of Anatomy at the Bartholomew's Hospital, etc. From the Third English Edition, with Additions. By WM. W. KEEN, M. D., Professor of Artistic Anatomy in Pennsylvania Academy of Fine Arts. Philadelphia: Henry C. Lea's Son & Co. 1881. 12mo. Pp. 148. (For sale by Messrs. West, Johnston & Co., Richmond.)

These *Landmarks* are so valuable that they have been republished, as an appendix to the last edition of that great book—Gray's Anatomy. The work is really one on regional or "clinical anatomy," as Dr. Keen aptly styles it; and while we accept as true the statement of the American editor, that "the living model is as essential in teaching anatomy as is the cadaver or the skeleton;" and that "one such model the student always has—himself," still we are forced to differ with the author in "his decision, not to introduce diagrams." We have not the space here to argue the question with our distinguished author; we have to state our point, as it were,

ad hominem. Whatever may be the amount of reading on any given geographical subject, one can learn more by the eye, in examining a panorama (if accurately painted), in far less time than many can devote to one point of study. This principle is recognized in all scientific publications. Hence, there is scarcely a popular scientific book of any description that is not more or less illustrated by wood cuts or drawings of some description. The book before us, however, is so excellent and so constantly serviceable, that we would not be understood as saying aught against it by making the suggestion we have done. A few accurately drawn diagrams, at least, would greatly add to the practical use of the book.

Science and Art of Midwifery.—By WM. T. LUSK, A. M., M. D., Professor of Obstetrics and Diseases of Women and Children, Bellevue Hospital Medical College, etc. With Numerous Illustrations. New York: D. Appleton & Co. 1882. 8vo. Pp. 687—xviii. (From Publishers.)

There seems to be no more of an end to publishing text-books on obstetrics than there is of women giving birth to children. As each mother thinks her babies are a little improvement in looks and sweetness and all else that endears child to mother, so each successive new work on obstetrics, by worthy and popular authors, gets the reputation of being a little better than the one last issued by another author; and yet, many illustrious obstetricians claim that the science and art of obstetrics have become so almost entirely perfected, that there is but little new to be said on the topics embraced in this special line of study. But there is a pleasure in having something new—even if the same facts are recorded by a new author. How few doctors would seat themselves now-a-days to read through Cazeau, Ramsbotham, Meigs, Bedford, *et id omne genus*! Every practitioner wants to get the latest book out; he wants to see what advances have been made, and yet he who keeps up his medical journal reading, is not sorely disappointed if he finds nothing particularly new. What Dr. Lusk has published scarcely needs any special remark. It is a good book—as good as any, either for the practitioner or student. It is far better than Meadows; more than the superior of Playfair, and fully the equal of Leischman. It is not so full of untenable, or, at least, debatable theories as of practical suggestions. Then, it has the advantage of being Americanized, and hence is much more serviceable to the profession of this country—although Dr. Lusk claims as a merit of his work, by indirec-

tion at least, for having given "special prominence to the labors of German investigators." While we neither deride nor undervalue the importance of such information as we get from foreigners, we wish simply to emphasize the statement, that many even of the *country doctors* of the United States are better practitioners than most of the German or other foreign laboratory students or hospital experimenters that we find frequently coming into profession ranks in this country.

Artificial Anæsthesia and Anæsthetics.—By HENRY M. LYMAN, A. M., M. D., Professor Physiology and Diseases of the Nervous System, Rush Medical College, Chicago, Ill., etc. New York: Wm. Wood & Co. 1881. 8vo. Pp. 338. (For sale by Messrs. West, Johnston & Co., Richmond.)

We have been highly interested in our examination of this work. It is the September number, 1881, of "Wood's Library of Standard Medical Authors," and is issued in the usual excellent style of the publishers. After giving a succinct, yet fair, history of the subjects of anæsthesia and anæsthetics in general, the work goes on to tell about the phenomena, physiological actions, etc., of anæsthetics. Under the head of "Administration," a number of artifices are described; and we note later on that a peculiarly large number of deaths from the leading agents administered occurred when some "special apparatus" was used. Although not always stated positively, we notice that most of the inhalers are made of impervious material. We are more and more satisfied that anæsthetics should all be administered with a free admixture of pure air. Especially is this very important in the administration of such agents as chloroform. The book is well written, full of instructive facts and suggestions, and nicely issued.

PAMPHLETS, REPRINTS, ETC., RECEIVED, for which we have no room for further notice; but most of which can be obtained by enclosing a letter stamp for each pamphlet to the respective authors named.

Report on Surgery, Read before the California State Medical Society, April 19, 1882. By WM. E. TAYLOR, M. D., Professor of Principles and Practice of Surgery, Medical Department University of California, etc. 8vo. Pp. 22. (A most instructive resumé of recent progress in surgery, as well as an excellent review of the results of some of the older operations and plans of treatment. His views regarding antisepsis are especially valuable.)

Color-Names, Color-Blindness and the Education of the Color-Sense in our Schools. By B. JAY JEFFRIES, A. M., M. D., Boston, Mass. From *Education*, March, 1882. 8vo. Pp. 11. (A useful paper, by a most worthy author, relating to subjects of every-day interest.)

Prognosis of Laryngeal Phthisis. By WILLIAM PORTER, A. M., M. D., St. Louis, Mo. 8vo. Pp. 12. From *Archives of Laryngology*, Oct., 1881. (Contains, in addition, an interesting discussion on the subject which took place during the last session of the American Laryngological Association.)

Editorial.

Business Manager of the Virginia Medical Monthly.—With this April issue, 1882, Mr. Leroy S. Edwards becomes *business manager* of the *Medical Monthly*. He will give prompt attention to all matters that come under his department. Hereafter, correspondents are requested to write on separate slips of paper whenever they refer to more than one subject in the same letter.

The Index to Volume VIII of the *Medical Monthly*, which we promised to issue with this April number, has been unavoidably delayed until the May number.

The Retreat for the Sick is a hospital established in this city some four years ago—chiefly through the active influence of ladies representing the several religious denominations. The building is on the lot of the Medical College of Virginia, and is State property. Since the war, until the Retreat was organized, every attempt made by the Faculty of the College to establish a useful hospital, signally failed. Immediately preceding the present system of management, it was scarcely entitled to be called a hospital.

The Faculty of the College, under these circumstances, in despair surrendered the hospital to a noble band of charitable ladies, under whose benign auspices it now continues, and has resulted in a degree of success that has surprised and won over its former opponents, as it also has exceeded the most sanguine expectations of its warmest advocates. The plan, in brief, was to place the hospital building under the management of ladies representing the several religious denominations of the city. These ladies, under the Presidency of Mrs. William A. Jenkins, have proven themselves to be

among the best and most untiring workers in a good cause ever known to the people of Richmond. Under their management and influence, each of the churches in the city, represented in the Board of Management, contributed liberally for the support of the institution, and transformed a deserted and dilapidated building—the abode of rats and other “small deer”—into a nice, cleanly and elegant home for the sick. The city of Richmond contributes only about two hundred dollars per annum, which illy compensates for the services rendered to many of our worthy poor. The United States Marine Hospital Service, the Chesapeake and Ohio Railroad and other companies and corporations have made special contracts with the institution to take care of their sick or wounded. Pay patients are received from all sections, at a nominal price, and each one is allowed to select his or her physician—provided, of course, the medical attendant is a gentleman of reputable character in the regular profession. If the patient has no preference, the Medical Superintendent, Dr. John R. Wheat, takes charge of the case. In addition to the pay patients, accommodations and attention are given to a full proportion of selected worthy charity patients. A House Physician is annually chosen from the graduates of the Medical College of Virginia; and in like manner a Resident Student is selected from the graduating class.

Under the present management, the Retreat has become generally recognized as an institution of great value to the profession and citizens of the State at large, as well as to the city of Richmond.

Such being a brief statement of the character and remarkable success of the Retreat under its present management—proving itself to be of much more benefit to the citizens of Virginia than it ever was before—it will surprise many of the profession and other citizens of the State, to learn that the Faculty of the Medical College of Virginia has officially notified the Board of Managers that, at the expiration of six months, beginning May 2d, 1882, they will have to evacuate the hospital which they have built up with so much care and toil and money.

It is peculiarly unfortunate that the Faculty should have issued this order at this special time. It will injure the College and benefit no one to let this order go into execution. Of course the prejudices of those who now have the important interests of the Retreat at heart, which have never antagonized those of the College, will be aroused, and thus

some of the remaining friends of the College will be estranged, and influences, direct or indirect, which have not before been used, will be brought out against the College. Especially at this critical hour in the history of the College is this order to the lady managers short-sighted and impolitic.

What can be accomplished for the good of the College by getting rid of the present system of government of the Retreat, so far as that government—which has proved so eminently successful and beneficial—relates to the College Hospital itself? Is it proposed to convert it into a fully-equipped *city* hospital—using the words *city hospital* in the usual acceptance of the term by the profession in cities? If so, the action of the Faculty, at this time, proposing to eject the charitable ladies next fall, is certainly premature, since it cannot be decided now what the new City Council—yet to be elected—will do in regard to establishing a city hospital at all. Even should a sufficient appropriation be voted by the Council, it is not probable that the “city fathers” would select this site as the place for the hospital. The arrangement of the house itself is not suitable for the purpose; nor does it furnish sufficient accommodations. If, conducted as it is, it is still insufficient in size, it certainly will not be large enough for a general city hospital for a city of the population of Richmond. As the building is State property, it is not probable the city would vote money to enlarge it—especially as its fate cannot be predicted with any degree of certainty. Certain it is that the building, under its present management, is of more benefit to the citizens generally of the Commonwealth, than if it were transferred over to the city authorities simply as a *city* hospital. While we are strong advocates of a really serviceable *city* hospital, we yet see no need just now, nor in the near future, for the establishment of two such institutions, provided ample grounds and proper buildings be now selected for the erection of *one general city hospital*.

If, then, the present College hospital building is not suitable for a *city* hospital; if it is improbable that the city authorities, under existing circumstances, would undertake to enlarge or improve it; and if there be no necessity for two city hospitals, it is assuredly improbable that the City Council would appropriate funds enough to support this as a separate hospital just for the benefit of the Medical College—a State institution—the future of which, under its present management, is itself uncertain.

Other reasons than those already stated, force us to the

conviction that, if the steps just taken by the Faculty to displace the present fair and gentle guardians of the Retreat are persisted in, injury to the College will follow. Among such reasons are, first, that an effort to transform the building into a city hospital is apt to fail of success, for reasons set forth in the preceding paragraph. Then, if a city hospital is not made of it, the College itself is so crippled in its finances that the Faculty will not be able to establish an independent College hospital. Thus, the College hospital, left without friends or money, would be vacant as to patients, however large the "Hospital Staff" might be. The clinical advantages now offered the students in the College by the Retreat would then no longer exist.

Further, if the City Council should agree to make a city hospital of the present building, the control of that institution would almost inevitably pass from under the control of the Faculty into the hands of the city authorities. And if this occurs, then the whole affair will become mixed up in city politics. There could be no guarantee, under such circumstances, that other practitioners than those composing, or in sympathy with the Faculty, would not be elected as medical attendants.

We have referred incidentally to the inconvenience which a change in the present management of the Retreat would occasion to citizens outside of the city; and to the fact that to transform the building into a city hospital, would result in injury to the city itself. Such a change of control would temporarily lessen the ability of the managers of the Retreat to provide accommodations for many non-residents of the city who seek medical attention from citizens in this city. Hence, some patients who are now beginning to look to Richmond as something of a medical centre, would go elsewhere for advice and treatment; and the money, which is now expended here, would flow into other communities.

The reaction of public and professional sentiment throughout the State against the Faculty of the Medical College of Virginia, which has heretofore been in sympathy with the College, will be great, if this order, given the Board of Managers to vacate, is not promptly rescinded. In view of the facts presented, if the Faculty still persists in its course, it becomes evident that that body—claiming to act for the good of the profession at large and for the benefit of the students of the College especially—will of necessity close the doors of the College Hospital, or Infirmary, as it was formerly called. Is the Faculty callous on this subject? or is the ac-

complishment of such a result in reality a part of their design—preferring the closing of the hospital doors rather than to see the Retreat prosper under its present management, which is daily proving a benefaction to many outside as well as inside of the city? If this latter be the ultimate, true purpose of the Faculty, then is the Faculty not worthy of the high trust committed to them; and the time will soon come when an indignant profession, as well as community, will take matters in their own hands, and require the retirement of the present Faculty, and the substitution of a better and more liberal one.

We make these remarks with a great deal more of pain than gratification. We have all along, in our editorial life, been anxious to place ourselves on the list of conservative journalists. Our editorial remarks, even up to the last issue of this journal—have looked to the advancement of the College interests. We even yet trust that our advice, which is but expression of the opinion of a large part of the profession of this State, will be heeded in time to save the College from the legitimate consequences of such rashness as the Faculty has just been guilty of.

What ought the Faculty to do now to correct the error committed? First, the order to the Board of Managers to vacate should be at once withdrawn. Second, let the College lend all its influence to promote the objects and to enlarge the present sphere of usefulness of the Retreat. Then let harmony and peace prevail in the medical camp; finally, let all pull together to advance the influence of the profession of the city and State. Then we may hope to see better days for the College and for the Retreat.

A Treatise on the Science and Practice of Medicine, by Alonzo R. Palmer, M. D., LL. D., Professor of Pathology and Practice of Medicine and of Clinical Medicine in the University of Michigan, etc., is announced as being in press by the well-known publishers, Messrs. G. P. Putnam's Sons, of New York city. It is to be completed in two large octavo volumes of about a thousand pages each. The first volume, "complete in itself," will soon be ready. Price per volume, "about \$5.00." The book is to treat of the "pathology and therapeutics of internal diseases." From the recognized authoritative eminence of the author, we are persuaded that this work will be one of great value.

New Remedies from Madagascar.—At a meeting of the Lon-

don Pharmaceutical Society in February last, Dr. Parker, Physician to the Queen of Madagascar, exhibited a very large collection of the materia medica of that island. He made some statements which should excite to activity some of the enterprising firms of this country, who have now quite thoroughly ransacked the flora of America for new remedies.—*Med. Record*, May 6.

Such an announcement will quicken the pulse of more than one live pharmacist. Yet we would ask, Is Dr. Parker an authority? The *Record* seems to think it probable that Madagascar may furnish something of importance to our materia medica.

A Vaccine Farm has been started at East Baton Rouge Parish, La.—*Miss. Val. Med. Monthly*, April, 1882.

Dr. Otis F. Manson's Paper, read before the late session of the Medical Society of Virginia, on "The Physiology and Therapeutic Action of the Sulphate of Quinine," has been extensively noticed. An appreciative notice of this treatise—which has been the labor of many years—appears in the April No. of the *N. C. Med. Journal*. Other prominent medical journals and authorities have likewise noticed this valuable contribution of an indefatigable worker.

Incontinence of Urine in Children.—Dr. Janeway (*Medical Record*) recommends as a preventive of this unfortunate condition, a combination of ergot, belladonna and a little of iron. The *Med. News* (according to the *Med. Summary*, March), says that Dr. Tom Robinson made two homely hints in a recent paper, as follows: "That mothers and nurses are frequently to blame for this troublesome vice. Young children should be taken out of bed during the night and placed on a chamber, so as to excite their bladders to act. * * And fear will frequently prevent young people from rising in the dark." Children should not be allowed to sleep in rooms without a dim, though sufficient light.

[Our experience is, that mothers and nurses can very easily habituate children to contain their urine day or night, by thinking of the necessity their children *must* have to void their bladders. By all means children should sleep in rooms sufficiently lighted for them to move about without fear of darkness.]

The New "New York Code," we presume, will be *questio*

vexata in the next session of the American Medical Association. Let no ancient practices because they are ancient, nor new theories because they are so called, influence the deliberations of the body on this and other questions. June 6th is not far distant, and much depends upon the action of the Convention to assemble on that day at St. Paul, Minn. While it is true that, with great unanimity, the medical press of the country have expressed a decided opposition to the recommendations of the New York Society in regard to consultations—still, it is true that the profession of that State have an influence that cannot be lightly regarded. Let there be no more secessions in America. But if theological, scientific, medical or other differences must be, let there be none of the bitterness of sectional or partisan strife.

Code of Ethics.—Dr. Hazard editorially says, in the *St. Louis Clinical Record*, February, 1882: "Away with a Code of Ethics which has no binding force except upon the young and unsophisticated? An instrument, the plainest provisions of which are constantly and unblushingly disobeyed by its most ardent advocates, has no useful place in our archives." Dr. Hazard goes on to say that such an "implement," in the hands of the unscrupulous, is an engine that can and does great damage. We do not go out of our way to say that we have known many cases in which, *not* the old practitioner, but the earnest and faithful and truthful young student has been made to suffer by the forcible execution of the Code, in one case, and by the omission in another.

Dr. J. Marion Sims, in a personal letter to us, states that he is about to return to New York, restored to health. A large constituency will be rejoiced to learn this fact.

The Medical Society of Alabama held its annual session at Mobile, April 12-14. Dr. J. B. Gaston, President, in his address, insisted that the Legislature of the State be memorialized to give the Medical Association joint supervisory functions with the various county Boards of Health. The officers for the ensuing year are: Dr. C. D. Parke, Selma, President; Drs. J. M. Godfrey, Sumterville, and Hopping, Latohatchee, Vice-Presidents; Dr. Thomas A. Means, Montgomery, Secretary, and Dr. W. C. Jackson, Treasurer. The Society expressed by resolution regret at the recent action of the Medical Society of New York, in regard to medical consultations with irregular practitioners.

The Treatise on Quinine, by Otis F. Manson, M. D., Professor of Physiology in the Medical College of Virginia, etc., we are glad to learn, is now in press by the well-known publishers, Messrs. J. B. Lippincott & Co., of Philadelphia. This paper was published in part in the *Transactions of the Medical Society of Virginia*, 1881. The article, as it then appeared, has attracted great attention, and has elicited such favorable notices from the press of the country, that the publishers have determined to issue a specially large edition of the work. We are gratified to learn that one thousand copies of the book have been ordered by one Northern party. So far as we have been able to learn, the expression of opinion by those who have read the paper, as it appeared in the *Transactions*, as well as from an examination of our exchanges which notice Society Transactions at all, that this article has been regarded as one of the highest worth; and we are advised that such a work is in great demand at the North. If needed there, it is certainly more valuable to the Southern practitioner.

A Quack Doctor, who plied his trade on Fifth Avenue, New York, was recently indicted on complaint of Dr. F. R. Sturgis, President of the New York County Medical Society, for practising medicine without proper qualifications. *The Boston Medical and Surgical Journal* (April 20) says that the quack "plead guilty when arraigned in court. He was fined two hundred dollars." If proper laws existed in many other States, there would be other prosecutions with certainty of conviction. A friend in an adjacent county recently stated to us that he was called on by a patient who had been attended by a party who could give no evidence of his qualifications. He (our friend) retired at once, but was immediately called back, but the 'Yarb Doctor' was not.

Prize Essays.—In noting the fact that only three essays were offered last year for the \$1,000-prize on the "Probability of a Discovery of a Cure for Malignant Disease, and the Line of Study on Experimentation likely to bring such a Cure to Light," the *Louisville Medical News* (April 22) says: "Such a prize offered to the profession of Germany or France would, without doubt, have been competed for by many more than three." * * * The Kentucky Medical Society offered last year a small prize of \$50 "for the best essay on Scarlet Fever." Only one paper was presented, and *that* was not adjudged worthy of consideration. The

Medical News thinks that better results would be secured if "some one of the vexed questions of etiology or pathology had been chosen." The suggestion of the *Medical News* deserves consideration. Yet we believe that there is room for competition for either prize named above.

Female Medical Education.—The Board of Overseers of Harvard University, by reason of the advice of the Medical Faculty, decided (April 12) that, "In the opinion of the Board, it is not advisable for the University to give any assurance, or hold out any encouragement, that it will undertake the medical education of women of Harvard College in the Medical School." While this action of the Overseers is not final, their recommendation to the Corporation will doubtless be approved, and, in a word, Harvard will say that women must seek medical education elsewhere.

Lewin on Drugs.—We are advised by Mr. George S. Davis, Medical Publisher, Detroit, Michigan, under date of April 20, that he proposes to issue translations of Dr. L. Lewin's work "Die Nebenwirkungen der Arzneimitteln"—[the action and effects of drugs]. The condition of the contract between Dr. Lewin and Mr. Davis is that the translation shall be submitted to the author for approval, and likewise all the additions and alterations, before the issue of the translation. The work will appear within three months.

The Valedictory Poem delivered by the late Dr. J. Aitken Meigs, March 12, 1879, has been reprinted in the *College and Clinical Record*, March and April, 1882. The editors of the *Record*, to meet a wish very generally expressed, have also published the address in a pamphlet form. Certainly the old students and graduates of the Jefferson Medical College will desire to preserve a copy of this unique poetical address.

Rush Medical College.—Dr. Roswell Park has been appointed Lecturer on Surgery in the Spring Course, and Dr. W. T. Bellfield has been appointed Lecturer on Physiology. *Chicago Med. Rev.*, April 15.

The Medical and Chirurgical Faculty of Maryland held its Eighty-Fourth Annual Session in the city of Baltimore April 11-15. The attendance was large and the addresses and papers submitted were of unusual interest. The *Maryland Medical Journal* (April 15) contains full synopses of the ad-

dressess. We quote elsewhere an abstract of Dr. J. J. Chisolm's report on *Ophthalmology and Otology*, and also of Dr. Frank Donaldson, in relation to Pasteur's discoveries.

"Southern Industries" is the title of an excellent monthly magazine just commenced at Nashville, Tennessee, by our friend, Col. R. F. Saunders, late of the *Southern Planter*, of this city. The initial (May) number gives the highest promise of great usefulness. Col. Saunders has experience, skill, and lacks no quality to make an enterprise of the kind successful. He must succeed.

The St. Louis Medical Society has been considering the question of amending their Code so as to permit consultation with Homœopathists. The majority of the committee [says the *Chicago Med. Rev.*, April 15] reported that the change ought to be made soon, but not just yet. The minority favored immediate action.

Jewish Pharmacists in Russia.—The persecution of the Jews in Russia has called for the severe condemnation of that Government by all civilized nations. It now appears that the Jewish pharmacists and their assistants in St. Petersburg have been "advised" by the Minister of the Interior that they will not be permitted to follow their calling after the current year. Recent advices from Russia lead us to believe that this folly of the Government was about to stop.

The Hygeia Hotel.—This favorite and famous sea-side resort at Old Point Comfort, Va., summer and winter, with each recurring season adds new attractions. It would be difficult for the average man or woman from New York to Florida, along the coast, to give the Hygeia the go-by during a summer month; and the back country to the Mississippi and beyond have found Mr. Phoebus the very prince of proprietors. We let no summer go by without putting in our appearance at the Hygeia. We believe that no sea-side resort in America presents more attractions than Old Point Comfort.

Messrs. B. Keith & Co.—For many years we have been familiar with the excellent preparations of this New York house. There are not more enterprising and conscientious pharmacists in the country. Their concentrated preparations commend themselves at once to the profession, and es-

pecially to the country practitioner, who, from necessity in many instances, must be druggist as well as physician. The convenience in form of their packages and the excellence of their preparations are all that can be required.

Dr. P. H. C. Noble has been appointed A. A. Surgeon for the Port of Richmond for the U. S. Marine Hospital Service. We presume that the removal of the former incumbent was due to the force of political pressure. We hope for Dr. Noble a pleasant tenure of office.

Summer Quiz.—Dr. Wm. G. Eggleston, Hampden Sidney College, Va., whose name is familiar to the readers of the *Medical Monthly*, proposes to instruct a few students in medicine during the summer months. Apart from the experience as a practitioner, Dr. Eggleston, for nearly two years, was under Dr. Ramsly's Quiz in New York, and thereafter, with great success, conducted a Quiz Class in that city. We would heartily recommend Dr. Eggleston to all students of medicine, especially to such as have taken a partial course of instruction.

A New College at Detroit was recently advertised at Detroit. The *Free Press* went to work and investigated. The result was that the chief patron, one Dr. H. S. Thomas, was a pure humbug. The exposure was so thorough that it is not believed that the College and the "*Venerands*" will come before the public again.

The Michigan State Medical Society held its annual meeting May 10th and 11th. Attendance small. The Society took no action in regard to the New York Code. This matter, we presume, will share a large part of the attention of the American Medical Association soon to assemble at St. Paul.

Advertising.—*Gaillard's Medical Journal* says: "There is no greater blunder than to object to a journal on account of its large advertising department. The size of this department is the key to a journal's success and the index of its prosperity." Correct.

The Verdict of the Jury.—We have received a copy of a piece of music called the "Verdict March," composed by Eugene L. Blake. It can be played on either piano or organ. The title page is very handsome, containing portraits of Hon.

Geo. B. Corkhill, Hon. J. K. Porter and Judge W. S. Cox; also a picture of the twelve jurymen who convicted the assassin of our late beloved President. Price, forty cents per copy, or three copies for one dollar. Postage stamps taken as currency. Address F. W. Helmick, Music Publisher, 180 Elm St., Cincinnati, O.

Garfield Hospital.—It is said that the effort to erect a Garfield Memorial Hospital in Washington is not meeting with the success it deserves.—*New England Medical Monthly*.

The same journal [May] thinks there will be "a profound change in opinion as to Guiteau's responsibility."

Cremation.—Dr. A. G. Soulé read before the San Francisco Medical Society in December, 1881, a paper in earnest advocacy of cremation. His article is well worthy of preservation. The discussion that followed was interesting. At this time we take it that the *sentiment* is against cremation, still in a few years, or perhaps in a hundred years, necessity may demand it. Embalming seems to be a lost art; and six feet beneath the surface may not prove sufficient for a corpse, still it will take some years to convince the people that the cremation of a body is not a sacred way of paying tribute to the dead, and sentiment will out vote sanitary considerations. The Society, taking in view all considerations, acted wisely in indefinitely postponing the further consideration of the resolutions looking to the establishment of a Crematory.

Hospitals in Small Towns.—At Plainfield, N. J., a town of not more than 15,000 inhabitants, a hospital, with two wards, of fourteen beds each, one for males and the other for females, has been established. It is said that this small hospital is a model of completeness. Its cost, including ground, did not exceed \$10,000. City Councils are short-sighted in making no arrangements for the prompt attention of the indigent and working classes. Is it not better to found and support hospitals than to make absolutely necessary that far more expensive charity—the Poor-House? The most short-sighted policy has restrained our legislators from giving encouragement to the establishment of City Hospitals.

Buffalo Lithia Springs.—This summer resort, under the management of Col. Goode, a gallant and distinguished soldier of the late war, and who was and is equally as distinguished

on the forum, presents special attractions to one who wishes a pleasant summer resort, and the advantages directly from the springs of a water that has now a world-wide reputation. One would be hard to please if he could not find all he wants in a summer vacation at the Buffalo Springs.

The Southern Dental Journal, recently established at Atlanta, Ga., under the editorial management of B. H. Catching, D. D. S., gives in its early issues evidences of editorial and managerial skill. We believe that it has no rival in the Southern or Southwestern States. Our dentists would do well to give it their encouragement.

Privy Vaults of New Orleans.—The *New Orleans Times* is authority for the following:

"In '79 the late Dr. Choppin, convinced that our privy-saturated soil was at least a partial cause of certain forms of preventable disease, set on foot an inspection of that New Orleans temple of liberty and independence, the privy vault.

A venerable gentleman, whose temple was investigated and ordered emptied and deodorized, delivered himself as follows. We give his speech here, as a revelation of the deep-seated feeling of many good people and their indignation at the invasion of their ancestral treasures proposed by iconoclastic reformers, who have no reverence for ancient smells:

'Le Doctor Choppin! Oui! He come with his acid carbolique. He look to mine vault. It is von good vault. Mine fater he make cet vault. I hold him from mine fater. Mine fater use him. I use him. Our families use him. More as fifty years since he was built. He nevare was empty. Why? Nobody complain. He was always good. Now come le Dr. Choppin. He make one mauvais smell wiz his acid carbolique. He say I must empty cet vault. I will not him empty. He is good vault. He is the vault of mon pere. I shall not him empty. He smell strong, but he make de good health. I know him. Le Dotor Choppin he wat you call humbug wiz his acid carbolique. Got him tam!'"

[In Virginia and elsewhere there are obstructionists who sit in City Councils and State Legislatures, and there are not a few whose names are not in either of these bodies recorded who in vigorous Anglo-Saxon, oppose any change in the plans of their fathers. Yet, we are encouraged to believe that all along the lines there are indications of healthy re-

forms. This "acid carbolique" criticism of the Creole is that of the average layman.]

Chairmen of Committees of the State Society appointed at an annual session to report on some subject then named, should have most solid reasons for failure to report at the subsequent meeting. Such reports as will prove permanently valuable cannot be *hastily* prepared. The Fellows are in the main thinking and reading men, and they want reports on the various subjects to embody the experience of the reporter, and his knowledge of the advances in his department. We are led to these remarks by the following paragraph from the *Ohio Medical Journal*: "The Society [State of Ohio] should cultivate such an *esprit du corps* that no member, having accepted an appointment to read a paper, would *dare* to fail without an unexceptionable excuse." The members of the Virginia Society have generally met their obligations in this respect, and few of the reports have not been esteemed of permanent value.

Queries and Answers.

Paralysis of Arm and Writer's Cramp.—*Mr. Editor*,—Tell us in your next number something about paralytic relapses. I believe there are seven or eight of us in this neighborhood who have had paralytic attacks more or less severe. We especially, and no doubt all of your readers, would be interested to know something about the inevitability of a return of the stroke, and the length of time that may intervene between the first stroke and subsequent ones.

Again, is there any possibility of mistaking "writer's cramp" for paralysis, when the right hand and forearm are affected? In my own case, the right hand lost the power of motion almost entirely, but not sensibility. By degrees a deadness of feeling crept up the upper surface of the forearm to the elbow. The palm of the hand and the under surface of the arm were never affected with that peculiar deadness of feeling, when touched, which affected the upper surface of the arm and the back of the hand.

As remedial agents, strychnine and nux vomica were mainly used. To the deadened surface a feeling of vitality returned by degrees; but in three weeks the whole deadened surface had recovered both power of motion and vital feeling.

Can't you give us some information on this subject—1st. Regarding the queries already put? 2d. Whether my case

was a genuine paralytic stroke? 3d. the difference between writer's cramp and paralysis of the same members?

N. E. W.

[It is impossible to answer the above queries sufficiently satisfactory to ourselves. Paralysis is but a symptom of disease, just as a pain in the abdomen, as our friend must know, is a symptom of such diseases as colic, peritonitis, dysentery, etc.

In regard to the questions made, whether there is likelihood of return of paralytic strokes, it is impossible for us to give any specific opinion, in view of the fact that sufficient description are not given of the seven or eight cases to which reference is made. Without a full knowledge of the history of the case, it would be impossible to prescribe. These remarks answer the first inquiry.

In reply to the second categorical question, we would say that evidence was wanting to show that it was, in the usual sense of the word, a "paralytic stroke."

As to the third question, there are differences in signs and symptoms of writer's cramp and other forms of paralysis of the arms.

We are persuaded, from the knowledge of the habits of our correspondent, that he is a subject of incipient writer's paralysis. Our advice to him is, that he should rest from Writing with his right hand, even if he should have to write with his left hand. After writer's cramp has once developed in one arm, such is the nature of the disease that it rapidly develops in the other arm or hand, should it be used as the already affected member.

Our correspondent's descriptions are insufficient for us to form a definite opinion as to the nature of the paralysis of his neighbors to which he alludes. Our best advice is, that they should consult their regular medical attendant.]

Obituary Record.

Dr. W. F. Green, of Decatur, Ga., died March 6th, 1882, of ulceration of the bowels.—*So. Med. Record.*

Dr. S. E. Pribble died at his home, Oronoco, Amherst co., Va., January 12th, 1882. His disease was consumption. He was born December 15th, 1850, in Amherst county, Va., and graduated March, 1879, from the Medical College of

Virginia. Although young in years and in experience, he was ripe in thought, and would no doubt have achieved an eminent position in the profession had health been spared to him.

Dr. Charles T. Murphy, of great eminence in the North Carolina profession, died at his residence, Clinton, N. C., January 9th, 1882, at the age of 55 years. He had for some time been the subject of carcinoma of the face, which proved to be his fatal disease.

Dr. John T. Hodgen, late President of the American Medical Association, died on April 27, after a brief illness, at his home in St. Louis. A correspondent of the *Medical News* (May 13), states that the announcement of his death was received by the people with whom he had long lived, with a feeling that could only be compared to that following the news of the assassination of Lincoln and Garfield. Dr. Hodgen was born January 17, 1826, in Larne county, Ky. He graduated at Bethany College, Va. (now W. Va.), and subsequently in medicine in St. Louis, in which city he lived for the past thirty-four years of his life. A year ago he presided over the sessions of the American Medical Association in this city. Few men have lived a more blameless life, and by the profession and the public his unexpected death will be sincerely lamented. His fatal illness was peritonitis.

James R. Wood, M. D., LL. D.—The announcement of the recent death of this eminent physician and surgeon, and founder of the Bellevue Medical Hospital, will be received throughout the country with profound sorrow. Recently it has been our duty to record the death of many eminent physicians; but the announcement of no recent death has caused more general sorrow and a feeling of loss to the profession than this.

Dr. Erskine Mason, a well-known surgeon of New York, died in that city on April 13, at the age of forty-five. The writer of this paragraph knew him twenty-two years ago, when his enthusiasm for his profession gave full evidence of the great success in the profession which distinguished his subsequent life. He occupied many prominent professional positions in several hospitals and colleges in the city of New York, and few men enjoyed a more enviable position in the profession than did Dr. Mason.

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Original Communications.

ART. I.—**Steatomatous Tumor Obstructing Labor**—By E. N. CHAPMAN, A. M., M. D., Brooklyn, N. Y., Membre Correspondent de la Société Medico-Pratique de Paris, etc.

As all unusual and hazardous labors, the management of which is a matter of serious doubt and perplexity, can but be of interest to the profession, I am induced to give the histories of the two cases following :

CASE I.—I was called during the evening of October 20th, 1867, by my then colleague, the late Dr. De Witt C. Enos, Professor of Anatomy, L. I. College Hospital, to see a woman, about twenty-six years of age, in labor with her first child. The Doctor, who had only been in attendance an hour or more when I arrived, reported that the pelvis was so blocked up by a growth at its inlet as to preclude the possibility of the child being born *per vias naturales*. An examination revealed a growth springing from the promontory of the sacrum and the adjacent parts, occupying two-thirds of the superior strait, extending into the excavation, and terminating in a prominent, globular mass the size of a goose's egg. It had a solid feel, as though of a fibrous nature, but was, as I thought, somewhat elastic and resilient when quickly and forcibly pressed by the tip of the finger. It spread out in all directions at its base, had a fixed attachment to the framework of the brim, and resisted every effort to displace it, either upward or laterally. The os uteri was, as far as could be determined, well dilated, and the child's head rested upon the symphysis pubis and against the ante-

rior face of the tumor. No enlargement, except the equable and regular outline of the uterus, could be detected by palpation of the abdomen, nor tenderness by pressure, either at the iliac fossæ or on the tumor, *per vaginam*. The patient had not during pregnancy experienced the common disorders to which, at such times, women are liable; but had enjoyed exceptional health; and neither she nor her husband suspected the existence of a growth, filling in the pelvis, and forcing up the womb into the abdominal cavity, as must have been the case a long time previous to conception.

In consultation on this singular and difficult case, we had little aid from standard obstetrical works—little as to any kind of pelvic tumors, and none as to that then and there claiming our attention. Dr. Enos, though uncertain as to the character of the tumor, was nevertheless quite certain that, from its hardness, it could not contain a watery, purulent, sanguineous or gelatinous fluid; that, from its immobility, it would not allow of displacement into the false pelvis; and hence that, from the reduction of the conjugate diameter to less than two inches, the delivery would not be feasible without a resort to the Cæsarean section.

Whilst conceding the more than probability in favor of his opinion, I yet ventured to suggest the possibility that this was a case of hæmatocele, pelvic abscess, or other nameless swelling having contents which might be evacuated. Furthermore, as I had in two instances punctured a collection of matter in the recto-vaginal *cul-de-sac* through walls as dense and resisting almost as these, I strongly insisted on the propriety, before resorting to an operation, always held in reserve as a *dernier resort*, of settling this question by the trocar, a procedure that would not involve the patient in greater danger. The absence of inflammatory symptoms at this or any previous date, did neither, I claimed, negative the idea of the effusion of blood or serum, nor even the formation of pus, as the fact of pregnancy has the wonderful power to repress morbid action, or, at least, the evidence of it, until delivery has taken place.

The labor having commenced only a few hours previous, and the patient's strength being unimpaired, it was decided to administer an anodyne, secure further counsel, and come at an early hour on the morrow to effect the delivery. The assistance of Dr. Hutchison, Professor of Operative Surgery, L. I. College Hospital, of Drs. J. Crane and H. S. Smith, Physicians to the City Hospital, and of Dr. George K. Smith, Surgeon to St. Peter's Hospital, being obtained, the exami-

nation was again gone over carefully, and the points of the case discussed fully.

The diagnosis of Dr. Enos being approved, the patient was arranged upon an improvised operating table, ether given by Dr. George K. Smith, and preparation made, *in extenso*, by Drs. Enos and Hutchison to perform Cæsarean section. Still my suggestion had been duly regarded, as it was decided to first test the practicability of evacuating the tumor by puncture at its more dependent portion, *per vaginam*. When the trocar was withdrawn, nothing flowed from the canula; and yet its point moved freely in every direction, showing that a cavity of some sort had been reached, but it was not a tumor having fluid or semi-fluid contents. Its walls were of the thickness and toughness of a fibrous capsule; being laid open by a bistoury, a brain-like substance began to exude. This being turned out by the finger, the tumor collapsed, the child's head dropped into the excavation, and the labor was terminated at once by the forceps. There was no unusual hæmorrhage then or afterwards, and the empty walls of the tumor, which had contained a pint, at least, of steatomatous matter, hung loosely from the posterior third of the pelvic brim. A portion of this matter, preserved in a dish for subsequent examination, was found the next morning to have settled down and hardened into a uniform mass, as though it were melted tallow. For no apparent reason, the child was still-born, and from peritoneal inflammation that declared itself in a few hours, the mother died on the sixth day. Unfortunately, a *post mortem*, though urgently requested in the name of science, was not allowed.

CASE II.—Subsequent to the above case—viz., February 14, 1873, I was requested to meet Drs. H. Bodkin, A. Otterson, President of the Board of Health, and J. S. Young, and render assistance in a labor obstructed by the presence of a large tumor in the pelvis. The patient, a primipara, eighteen years of age, had had pains several hours, and had, though the cervix was relaxed, made no progress. The state of things revealed by an examination was scarcely different, even in minor points, from that detailed in the history just given. There was a tumor having the like attachment, filling the like space, presenting the like fixedness, and possessing the like solidity. The child's head occupied the same position, the patient had enjoyed the same immunity from local and constitutional disorder, and the husband had lived in the same ignorance of any impediment as to his marital rights.

Having related my experience in the above case and urged the probability of this being another of the same kind, it was agreed to determine the fact by puncture. The trocar, after passing through a tough, membranous structure, entered a space where its point ceased to meet with resistance; and yet, on its withdrawal from the canula, no fluid made its appearance. I now divided this tough and membranous structure by a crucial incision, and introducing my finger, turned out a full pint and a half of a substance that looked, as in the other case, like the fetal brains as they flow from the vagina in embryotomy. An empty, flaccid sac now alone remaining, and all obstruction to the advance of the child's head being removed, I yielded my place to the senior consulting physician, Dr. Otterson, who speedily completed the delivery with the forceps. This child was also dead-born; but the mother, though attacked with a severe suppurative fever and confined to her bed for two or three weeks, eventually regained her health.

This woman was again confined, on the 6th of March, 1877. The labor was natural, the child alive, and the subsequent progress satisfactory. Drs. Bodkin and Otterson made an examination the seventh month of pregnancy, and found a movable, elongated tumor of a moderate size, which, it seemed to them, would offer no serious obstacle at term, when pushed to one side or elevated above the brim. The result proved the soundness of their conclusion.

Inasmuch as the tumor would probably, before another confinement, attain something of its original bulk, and necessitate the discharge of its contents at a time when inflammation is prone to set in, I suggested to Dr. Bodkin that it might be judicious, when her health should be fully re-established, to empty the sac and inject tincture of iodine, as in the operation for hydrocele. Thus, perhaps, the cavity, secreting the steatomatous matter, might be closed by adhesive inflammation, and future danger avoided at slight risk.

Subsequently, I submitted another proposition—the evacuation of the contents of the tumor at the fifth or six month of her next pregnancy, when, from the centralization of vital activity in the uterus, there would be less hazard of inflammation than during the process of disintegration at term. The pressure of the womb, I thought, would tend to prevent the sac from refilling, and might possibly cause adhesion of its inner walls.

July 4, 1876. Mrs. M. was again confined. The child presented by the breech and was dead-born. Dr. Bodkin,

who was alone in attendance, found the pelvis more obstructed than in the previous labor.

August 27, 1877. Dr. Bodkin, assisted by Dr. Young, delivered Mrs. M. with forceps. Great difficulty was experienced from the increased size of the tumor, but the child was born alive. This, as were all the others, was a boy. The parents have now two children living. After her second confinement, Mrs. M. visited St. Mary's Hospital for women. Dr. John Byrne, Surgeon-in-Chief, diagnosed fibrous tumors of the uterus, and had no advice to offer except to caution her against any operative interference.

Subsequently, she visited the Woman's Hospital in New York. Her case excited so much interest that she reported herself occasionally. She did so for a couple of years. Prof. T. Gaillard Thomas, one of the attending surgeons, diagnosed fibrous tumor, and suggested the use of electricity. Both he and the assistant surgeons, many of whom made an examination, warned her of the danger of any tapping, lancing, or cutting operation. Certain death, they said, would be the result.

Upon learning these facts, it was quite clear to me why I had been so sedulously avoided by the patient, although I had at her first confinement saved her life by laying open a steatomatous tumor, which since had been mistaken for one of more solid structure.

All this while, Dr. Bodkin was urgent for my recall, and confident that the sac had refilled. During the fall and winter months of 1879, flooding took place at various times, and so reduced her that the candles were lighted, the last rites of the Catholic Church performed, and her momentary departure expected by waiting friends. When again called in to see Mrs. M., during the last week of January, 1880, I found her, though improved, still much reduced by frequent and prolonged attacks of flooding. In consultation with Dr. Bodkin, it was concluded that to save her life, an operation was imperative; and also that it would be better, by preparatory treatment, to improve her condition, if possible; but should we fail in this, it would be proper, under any circumstances, to puncture the tumor and make an effort in her behalf, at any and all hazards.

March 4. The loss of blood having been restrained by rest and seclusion, and her strength improved by food and tonics, it was thought proper to proceed without further delay. A compact, hard tumor extended from the right side of the pelvis to the left iliac fossa, where it could be felt as

a round ball, half the size of the closed hand. The brim and cavity of the pelvis were occupied by a solid mass, immovably fixed to the bones beneath and crushing the womb into a small space to the left side near the sacro-iliac junction. In fact, it was impossible to define more of the uterus than the flattened os uteri. Still there had been no obstruction to the urine or fæces. No wonder the distinguished gynecologists, with tissues as dense and hard as these before them, had diagnosed a fibrous tumor, and left the poor woman in the hands of Nature!

I thrust a trocar into the lower part of the tumor at the point of greatest fulness, and when its point ceased to meet with resistance, withdrew it from the canula. Only a drop or two of dirty looking fluid escaped. Then removing the canula, I inserted into the puncture a sharp-pointed bistoury, and cutting downwards made an opening large enough to admit the index finger. The finger first entered a space interlaced with fleshy bands, that were easily broken down; and then, passing upwards about two inches, entered a large cavity, filled with pultaceous material. This, as it flowed out, had the appearance of the foetal brain; and, when it was examined under the microscope by Dr. Gray and myself, proved to be structureless. A free passage having been made by the finger, the steatomatous matter was allowed to find its way out spontaneously. As before, a smart irritative fever, with rapid pulse and high temperature, was excited. On the third day there was a serous discharge mixed with broken down steatomatous matter; on the fourth, a copious secretion of pus; on the fifth, there was a slight flow only from the vagina. The natural heat and sensibility of the body returned, and the finger entered an empty cavity nearly the size of the closed hand.

March 15th.—The pulse is 94; the fibrous mass has diminished; the opening is patulous, and the cavity has contracted. The patient is weak and nervous, gets little sleep and has no appetite. There is considerable purulent discharge that has at times contained portions of fleshy and steatomatous matter.

March 20th.—The patient is much prostrated, and has aphthæ in the mouth. A diarrhœa that set in two or three days ago has told on her strength; she gets no refreshing sleep, and has no relish for food.

March 27th.—There is great improvement. The aphthæ have disappeared and the diarrhœa has stopped, the cavity contracted, the tumor lessened, and the appetite improved.

Purulent matter comes away on the finger after an examination.

April 10th.—The patient has been out of bed, and would now be in excellent condition were it not for a neuralgic pain that shoots down the front part of the left thigh to the knee. The cavity is nearly closed, and the fibrous mass in the vagina is melting away by disintegration, and shrinking back to the right side of the pelvis. The finger which readily enters the opening still meets with a fleshy, friable structure. The purulent secretion, small in quantity, still continues. The menses have not returned since the operation.

May, 1882.—After the last report Mrs. M's health became good in every respect. In October, 1881, she miscarried in the third month. In February of the present year she came to my office by direction of Dr. Bodkin. She was then five and a half months advanced in pregnancy. The Doctor thought she could not be delivered of a living child. On examination, I found a fibrous mass, an outgrowth apparently of the capsule of the steatomatous tumor, blocking up the posterior part of the pelvis. As the Doctor and I, in consultation, agreed that the woman's life would be jeopardized by any delay in emptying the womb of its contents, we induced labor by introducing a large sponge tent into the os uteri, and giving, on its removal, the fluid extract of ergot. She recovered without accident, and speedily regained her health. That trouble is in store from this fibrous tumor seems certain.

In this case, the evacuation of the steatomatous matter excited no graver symptoms than would have ensued had the tumor been external and the patient exsanguinous. The steatomatous matter was allowed to come away gradually to avoid shock; the air was given free access to promote supuration, and the passage was kept open by inserting the finger every third or fourth day, both to insure egress from the cavity, and to cause the breaking down of the fibrous mass obstructing the pelvis. At present, it appears as though, should disintegration continue as it is now progressing, there would be little left to encroach upon the uterus. The removal of this fibrous mass was even more important than the evacuation of the steatomatous matter as it filled in the pelvis, and was the chief cause of the hæmorrhage. The medical treatment, of course, consisted of tonics, stimulants and nourishment.

It now appears almost certain that this patient, who had

been left to drag herself slowly and wearily to the grave, without an attempt being made to check the frequent and copious losses of blood, will be restored to her family and friends, relieved of the shadow that has darkened her life, and granted a long respite, perhaps for years, from the encroachment of this tumor that had so nearly ended her days.

Cases similar to this are rare—so much so, as to render it a noteworthy fact that two should fall under the notice of one physician, and that, too, in patients who reside within three blocks of each other, and also in a remarkably brief period of time. Dr. Denman relates a case in his *Practice of Midwifery*, communicated by a gentleman whose authority and accuracy are unexceptionable, as follows: “A lady, after the birth of her eighth child, fell into a state of bad health, with many painful and troublesome symptoms, but no marked disease. These were by some physicians considered as nervous; by others as scorbutic, and by others as rheumatic, or of a gouty nature. Various medicines were given, and different means tried for her relief, but without any good effect. At the expiration of two years, she became again pregnant. All her other labors had been very easy and natural, but when Dr. Hunter was called at the commencement of this, he found an obstruction at the superior aperture of the pelvis, which he believed could only be occasioned by the projection of the lowest of the lumbar vertebræ, or the upper part of the sacrum. It was then supposed that she had the osteo-sarcosis, of which her complaints had been symptoms. It was impossible for her to be delivered in any other way than by lessening the head of the child. She died on the fourth day after her delivery. Leave was given to open the body, and when the pelvis was examined, the tumor, which was imagined to be a projection of the bones, was found to be an excrescence of a firm, fatty substance, springing from one side of the upper part of the sacrum, and passing across so as to fill up a great part of the superior aperture of the pelvis. It does not appear to have been proper, or within the bounds of art, to have attempted or to have afforded her any other assistance; but had it been known that the tumor existed, before the occasion of labor,

it might have been judged equally justifiable and expedient to have brought on premature labor, as in case of actual distortion of the bones of the pelvis."

Mr. Bell, surgeon, records in the *Edinburg Med. and Surg. Journal*, Vol. XVI, page 365, the history of a labor obstructed by a large, fatty tumor filling in the pelvis. The patient—a primipara—having been left to the natural efforts some twenty-four hours, "I endeavored," he says, "to assist the expulsion of the tumor, by grasping that part of it within my reach, and gently pulling it, from time to time; I at last succeeded in bringing the bulkiest part of the mass without the parts. I now found that it was attached by a neck, but this neck, instead of being slender, as I had hoped, was, to my great disappointment, so thick that I could scarcely grasp it. Space not being afforded by this procedure for the descent of the head, the perforator was used, and the effort made to draw down the collapsed bones, but with only partial success.

"The exhaustion becoming extreme, an opiate was given to induce sleep and restore vitality. Four or five hours subsequent, the delivery was effected, yet with great difficulty; and, directly after, two ligatures were placed around the neck of the tumor. The next day I cut off all that part of tumor below the ligatures. Her recovery has been rapid and complete. The tumor, which was strictly steatomatous, was attached to the posterior part of the uterus, more than six inches from its mouth. Its bulky part was heart-shaped, and I am convinced it must have weighed fully six pounds."

In the *Medico-Chirurgical Transactions*, Vol. X, page 50, Merriman, in the histories of five pelvic tumors obstructing labor, gives one that contained "adipoceros matter." "The patient, about forty-four years of age, was the mother of six children, the first and last of whom were delivered by forceps. An interval of five years having occurred, she was delivered by turning, and by blunt hook and crotchet, with extreme difficulty, of her seventh child. The obstruction was a tumor between the rectum and vagina, that was then first detected. At the autopsy, the knife accidentally wounded the tumor, and some of its contents escaped.

The tumor was situated between the cervix uteri and the rectum, forming a cushion in the hollow of the sacrum, the superior portion rising an inch or more above the projecting part of that bone; its shape was elliptical, flattened at the anterior and posterior surfaces by the pressure it had suffered; its size was that of a large orange, or the head of a fœtus at six months; it was contained in a cyst, apparently formed of the peritoneal reflection at its superior part, and of the cellular membrane, connecting the rectum and vagina. *It was not ovarian*—the ovaria being still visible, were of their proper size, and in their natural situation with regard to the uterus. From its bulk, the rectum was nearly surrounded by it, and the anterior portion of the rectum was inseparably connected with the tumor. The whole mass was soft and compressible, and though the cyst was in most parts very thin, it had not given way by the force employed in the delivery.

The contents of the tumor were regularly disposed in layers—the concave portion being exactly adapted to the convex surface of the next, and the diameter of each, about the breadth of a sixpence. The color resembled tallow, and they appeared to consist of adipocerous matter.”

Commentary.—In addition to distensions of the bladder and rectum by their normal contents, there may be found bloody and purulent collections, and fatty, polypoid, fibrous, and ovarian tumors, narrowing the pelvis, and rendering the labor difficult, if not impracticable. Were the obstruction detected at a sufficiently early period of pregnancy, it should be determined whether or not the tumor, by its size, forbids the passage of the child; and, such being the case, whether or not the tumor is loosely attached and readily elevated above the brim into the false pelvis; but, were these conditions lacking, the tumor being both large and immovable, it would certainly be the wiser course to induce premature labor as advocated by Ramsbotham, Lee, Tyler Smith, Ashwell, Barnes, and others.

At the advent of labor, were the tumor too large to allow the child, even when mutilated, to be delivered except with great difficulty and a tedious operation, and too fixed to per-

mit its displacement from the pelvic cavity, time should not be lost and greater hazard incurred by trusting to the natural powers, or by essaying manual or instrumental modes of delivery, when success would be an unlooked for event. The fact, as to the available space in the excavation, ought to be determined at once. This space, whatever it may be, can neither be enlarged by the length of time passed, nor the number of pains endured, nor the patient's chances of recovery increased by allowing her to become exhausted before assistance is rendered. Turning is out of the question when there is much shortening of one or more of the pelvic diameters, as the child's head would lodge above the tumor, and its body fill in the bones—thus rendering the situation worse than at first; and embryotomy is equally objectionable, as it would necessitate violent and prolonged efforts and the removal of the body as well as the head, piece-meal.

These means being excluded by their inapplicability, the only alternatives remaining will be either an operation on the tumor to open the natural passage through the pelvic bones, or on the uterus to make an unnatural passage through as that of the mother, is to be regarded, a point never to be the abdominal walls. In each, the life of the child, as well lost sight of in determining upon any course of procedure. If the tumor fluctuated, no one would question the wisdom of puncturing it with a trocar; but if the tumor were firm and resisting, as though a solid mass, many would hesitate even to use the aspirator, and most doctors would discard all modes of exploration, as wholly inexpedient and useless. It should, however, be recollected that the nature of the tumor is not always positively diagnosed; that the chances are largely in favor of a diseased ovary; that a collection of blood or pus is apt, from the pressure to which it is subjected by the uterus, to feel compact and fleshy; that fibroma degenerate, now and then, by central softening; that semi-fluid, gelatinous, or steatomatous matter, contained in a tense sac, imparts a false sense of denseness, and, therefore, that an expedient, as simple as puncture, is to be practised, before resorting to an operation like Cæsarean section, which is attended with such a fearful loss of life.

Should the point of the instrument employed enter a cavity, and move freely in all directions, and yet no fluid escape, it would be less hazardous to lay open the sac and turn out its contents than to lay open the peritoneal cavity, and drag the fœtus through the uterine and abdominal walls.

If the tumor proved to be fibrous, and yet were fitted for an operation under ordinary circumstances, it still would seem to be better than Cæsarean section, to apply a ligature as high as possible and excise the inferior portion, or to remove the mass by the *écraseur*. The hæmorrhage attending either operation could not be very great, and even should it prove to be serious, it might readily be commanded by the persulphate of iron. Now, however, inflammation which may follow the evacuation of a sac, and still more the excision of a solid growth, must be anticipated as almost a certain contingency. Nevertheless, the danger, though imminent, cannot be as great as when the peritoneal cavity is exposed to the air and other irritating agencies.

The above conclusions find support in the recorded experience of those who have seen most of these complications. Merriman (*Med. Chir. Trans.*, Vol. III) in presenting the histories of two cases, and alluding to others reported by Ford, Park, and others, says: "Upon the whole, therefore, I am disposed to believe that where the tumor in the vagina occupies a large space, it would be a more warrantable practice to remove it by excision, if it consisted of solid substance, and certainly to puncture it, if it contained fluid, rather than to expose the child to certain death, and the mother to great hazard by the use of the perforator." Again, in the tenth volume of the same work, he gives five cases more, and observes: "Upon the whole, the evidence we at present possess is mostly in favor of opening the tumors, for of the nine women who recovered more or less perfectly, five appeared to owe their safety to this operation; and of the three children born alive, or supposed to be so, two were preserved by the same means."

Moreau (*Midwifery*), summarizing his conclusions from the same collection of cases, twenty in all, offers the following propositions: "1st. That the tumors under consideration

deserve the peculiar attention of the practitioner on account of the obscurity of their diagnosis. 2nd. That when the tumor occupies a large portion of the pelvis, neither version, nor cephalotomy will suffice. 3rd. That the tumor should be raised up whenever it is movable. Two women and two children appear to have owed their lives to this plan of treatment. 4th. That the opening of the tumor is of great importance, since of the nine women who recovered, five, and two of the four children born alive, appear to have been saved by this opening. 5th. That in some cases, those in which the tumor occupying the whole of the pelvis is not diminished by incision, the Cæsarean section is our only alternative."

Playfair (*Obst. Trans.*, Vol. IX) has collected fifty-seven cases of tumors, known or supposed to be ovarian, which obstructed the birth of the child. The results of the various modes of treatment he presents in the following table:

	No. of Cases.	Result to Mothers.		Result to Children.		
		Recovered.	Died.	Alive.	Dead.	Doubtful.
Left to natural powers.....	13	7	6	5	5	3
Puncture of tumor.....	9	9	...	6	3	...
Pushed above brim.....	5	5	...	3	1	2
Embryotomy.....	15	8	7	...	15	...
Cyst ruptured spontaneously.....	4	2	1 + — 1?	...	1	3
Turning.....	5	1	4	1	4	...
Forceps.....	2	1	1	1	1	...
Rupture of uterus.....	2	...	2	...	2	...
Cæsarean section.....	1	...	1	...	1	...
Premature labor.....	1	1	...	1	...	...

Spencer Wells (*Obst. Trans.*, Vol. XI) records the histories of five women, one of whom was tapped three times, one twice, and three once. Recovery took place in each instance, and all the children were born alive. He concludes: "There is no proof that tapping an ovarian cyst is more dangerous during pregnancy than at any other time, and it will generally afford immediate relief to distention at a very slight risk to the mother, and lead to the natural termination of pregnancy, in the birth of a living child, if proper precau-

tions be taken to prevent the escape of ovarian fluid into the peritoneal cavity, and the entrance of air into this cavity and the cavity of the cyst."

Drew relates (*Edinb. Med. and Surg. Jour.*, Vol. I) two cases of fibrous tumors which were attached to the sacro-sciatic ligaments and bones of the pelvis. The first case dying, he found at the autopsy that the tumor, on its being cut through, was immediately detached. Another case, identical in character, presenting itself six months afterwards, he practised a bold operation, and saved both the mother and the child. This operation is thus described: "Having laid my patient on a table in the posture of operation for lithotomy, my assisting friends holding each knee, and the midwife the shoulders, I made an incision by the right side of the perineum and anus towards the os coccygis, and with the second stroke of the scalpel brought the tumor into view. I passed by finger before and behind its root, which I easily divided with the knife, and introduced my hand and detached it from the side of the pelvis; withdrew that hand and introduced the other, by which I separated it with equal facility from the vagina and rectum; and, to their great pleasure and surprise, brought it away."

Burns relates (*Midwifery*, 8th ed.) a like case in which he adopted Drew's operation, and secured the like fortunate result to both the mother and the child.

Ramsbotham in giving (*Obstetrics*) the history of a case of labor, complicated with polypus uteri, which was attended by him and his father, says: "In such a case the question arises, whether we shall remove the polypus, or deliver the patient by instrumental means? If we can deliver easily by the forceps, we had better have recourse to them, because they do no injury either to the child or mother; but if delivery is impracticable through their agency, rather than perforate the skull, a ligature should be put around the stem and the tumor should be cut off below."

ART. II.—Treatment of Consumption Indicated by the Discoveries of Koch and others of its Parasitic Origin. By M. L. JAMES, M. D., Professor of Materia Medica and Therapeutics in the Medical College of Virginia, Richmond.

The ranking of consumption among the zymotic diseases, which seems at least now to be proper, the next question is the remedy for it. Perhaps in time this may be secured, in the form of prophylaxis, by innoculating with germs of the disease of mitigated virulence, as in the case of vaccination for small-pox, and Pasteur's method for splenic fever. Pending its decision, no other subject of more pressing importance in Medicine or the political or social economy of our race can engage the attention of the profession than measures at once to lessen the destructive force of this, the deadliest disease of all that "flesh is heir to."

For many years the natural history of tuberculosis, and the therapeutic results which I have observed from the use of remedies of germicidal power, has excited in my mind suspicions of its zymotic nature. These suspicions have gradually grown upon me into strong and positive convictions, though I have not had the opportunity of detecting parasitic growth by microscopic observation. Four years ago, in a paper entitled "Consumption: the Question of its Curability and Treatment," which I had the honor to read before the Medical Society of Virginia, and which was published in its *Transactions*, I called attention to the prominence of the febrile phenomena of phthisis and to the salutary results of remedies addressed especially to that feature of the disease, citing several cases of distinctly defined phthisis which, chiefly under the use of such remedies, had secured periods of exemption from the disease ranging from one to nine years, and seemed in all respects to be cured.

Subsequent observations have so strengthened my convictions, that for the past three years my treatment of consumption has been almost exclusively confined to agents belonging to the anti-zymotic class, and in view of the curative results I had secured, I had felt authorized to declare, as I did, to our classes in the Medical College of Virginia my belief that

consumption was essentially a zymotic disease, and that its proper therapeutics is founded in such recognition.

Within the past thirteen years I have kept the record of twenty-three cases of phthisis of well marked diagnosis occurring in my private practice, which have been relieved of all constitutional symptoms and physical signs for periods ranging from eighteen months to now thirteen years, most of the subjects exhibiting as high a present degree of physical health and strength as average persons in the community. All of the patients whose cases ended thus favorably fell under my charge in the first stage of the disease, and most of them with the earliest positive expressions, except two. In these two cases a cavity of the size of a walnut had occurred to one, and two smaller ones had occurred to the other.

Besides these twenty-three cases, one other seemed to be well for a period of nine years, who had a subsequent attack and died. It would seem to me, however, as illogical to conclude that this case was not cured, with all traces of the disease absent for so long a time, as to conclude that a person cured of malarial fever, who had at such an interval had a subsequent attack of malarial fever, was not cured in the first instance.

It is, perhaps, proper for me to say that I have kept the record of sixty-two other cases, treated at various stages of the disease, fifty-one of which have died, and the issue of eleven others is yet undecided, they still being under treatment.

My earlier successful cases were treated chiefly by quinine, carbolic acid in form of inhalation, glycerine and alcohol; by rest, pure air, timely exercise, and suitable food, all of which measures are, under varying circumstances, to a greater or less extent, anti-zymotic.

In addition to these remedies, in different conditions I now also use salicylic acid, salacin, sulphur and its compounds, especially the hyposulphites, arsenic, and paintings with iodine, some of which is absorbed, and besides its counter-irritant effect, exerts antiseptic power. I regulate as far as practical, with mathematical precision, the external temperature—never allowing it to be high enough to promote fever

or debility, or low enough to produce congestions and colds. Further experience will enable us to determine which of the anti-zymotic remedies is most efficient, just as we now know that quinine is *the* specific for malarial fever, and sulphur for itch; or if the researches in pathology shall establish different forms of tuberculosis, then which remedy is best adapted to individual pathological types.

If asked to explain how these remedies act, I will answer distinctly, what has been implied already, probably by destroying the organic parasite which produces the disease, just as we know that sulphur does in a case of scabies, and its compounds do in scalled-head and fermentative indigestion, and quinine probably does in malarial fevers.

Pressing engagements prevent my giving at this time the details of the treatment I employ. I will say this, however, that ordinarily, as I have before intimated, I build my hopes of success on *early treatment*. It has, at least, not as yet been my good fortune to successfully grapple with the difficulty of this dangerous zymotic poisoning, complicated with structural disorganization of vital organs. And for the reason that I believe that this cannot be done, and the earlier treatment is commenced, the greater the chances of success, I know of no more important subject in practical medicine than the early diagnosis of tuberculosis. Happily, with the present resources of our art, this may in almost all instances be made demonstrative. But to compass it will, in many instances, require a ready familiarity with the significance of the whole range of constitutional symptoms and physical signs. The accurate recognition of fever, its degree and variations, is especially important. This can of course only be done by the use of the thermometer. In taking charge of a case of tuberculosis, I always see that the patient or his attendants are provided with a tested thermometer, instructed in the proper use of it, and required to keep a record of the temperature at all periods of the twenty-four hours, impressing the importance of care by telling them that the success of the management of the case will depend upon the ability to control the fever. My experience justifies me in saying that in a considerable proportion of

cases this may be done, and the morbid agency, whatever it may be finally settled upon as consisting in, may be destroyed.

The *Materia Medica*, in its more limited range in the drug-stores, and its wider range in the universe of matter and mind, must be boldly but practically handled, and the patient watched with ceaseless vigilance. I attend my cases of tuberculosis, at least the more acute forms of it, almost as closely as I do my cases of typhoid fever, ready to combat at once all hurtful changes.

To patients favorably situated, in the earliest stages, where the digestive organs will tolerate for a considerable length of time maximum doses of the anti-zymotic agents mentioned, I believe that a larger number of favorable final issues may be expected than I have yet been able to report. My proportion of cures in recent years much exceed those formerly, as I understand better the plan of treatment, and employ it with more courage and decision.

Unhappily for the doctor, he is usually not called in the the earliest stages of tuberculosis, or if so, the digestive organs of the patient will not tolerate the remedies in sufficient quantities and for a sufficient length of time to enable him to destroy the morbid cause. In such cases he must exercise a practical ingenuity by introducing them in other than the usual channels. Inhalations now, then enemata, then hypodermic injections, epidermic methods, or otherwise.

It is proper for me to remark, that while my chief reliance is placed upon remedies of the anti-zymotic class, in the changing conditions which are liable to occur in this disease I do not ignore entirely the remedies that have been more usually employed. And I wish here to reiterate my abiding confidence in the value of a succession of blisters.

And I will take occasion to say that ordinarily it is best that the friends of the patient and the patient himself should be frankly informed as to the nature of his malady. A wise discretion should of course be employed here as to the subjects, the time, and the manner of making this announcement, but I do not remember ever seeing any but ultimate good results come from such a communication properly

made. It will produce some shock and momentary depression with the patient, but that will be all. For a patient to be permanently despondent, is almost pathognomonic of the absence of phthisis. While if properly informed with such assurances as we may reasonably and truly give him, his courage, his hopes and his exertions will usually exceed even those of his doctor. Hopefulness with a consumptive amounts to a monomania, but it is a monomania which his physician may utilize.

If time allowed I should be glad to refer to other facts and considerations in connection with this important subject.

Clinical Reports.

Traumatic Hernia of Lung. B. B. TEMPLE, M. D., Danville, Va.

In December last, N. C., aged 24, a tall, raw-boned, well-made man, in good health, got into a difficulty at a country store thirteen miles from this city, and was cut from behind with a large knife, on the left side, between the ninth and tenth ribs, about equal distances from the sternum and spinal column, making a wound about two and a half inches in length, and penetrating the lower extremity of the lower lobe of the lung probably two inches; the two segments of lung tissue to the bifurcation protruded through the external wound. The protrusion was thought to be due to the exertion the man made in defending himself, which he did until he fell from loss of blood. The first physician who reached the wounded man failed to recognize the character of the protrusion, for it was dark and cold, and, naturally, he hurriedly got a bandage around him, removed him to shelter, and revived him by administering large quantities of whiskey. He was cut on Monday evening, and on the following Wednesday I was sent for to meet his attending physicians, four in number, in consultation.

After it had been demonstrated that it was lung tissue which protruded, the question arose what was to be done with it. One proposed to put it back; one to cut it off; one to ligate it; but it was finally agreed to let it alone. The man was in an extremely critical condition (as Garfield's surgeon said when he was dying, "there is *gravity* in this case"), from the great loss of blood, and it was feared there would be secondary hæmorrhage should the proposition to

ligate be accepted. The great difficulty in draining such a cavity, and the certain passage of air through the wound, which was then tightly plugged by the lung tissue, decided us not to return it. It was thought there would be sufficient pressure to cause separation of the protruding mass by the ribs, but in this I was mistaken, and its disappearance was slow and tedious. He was a long time in getting well, but is now going about, and no doubt, but for his surroundings, he would have been up sooner. All was done for him that could be done in an open shed room attached to the store, but he missed the comforts of life, which he had been accustomed to enjoy at home.

From what little experience I have had in protrusion of lung tissue in gun-shot wounds, I should not be disposed to return it—certainly not when it was wounded, and I am not sure that I should if it was not. What do you think about it?

[Dr. Temple, in the suggestions made in the last paragraph, certainly has all of the best authorities on his side. Ligation of the protruding portion of lung, we are disposed to think, would have hastened the cure. After the slough comes off, it is recommended to paint the stump with some such agent as carbolic acid.—ED.]

Proceedings of Societies.

The Medical Society of West Virginia.

The fifteenth annual meeting of this Society was held in Wheeling, May 24th and 25th. While there are 860 physicians legally qualified to practice medicine in West Virginia, the State Society membership does not exceed 100, and only one-third of the members of the State Board of Health are connected with the State Society; yet the *material* of the Society is, in every way, most excellent, and is the true representative of the State profession. We make a brief report of the proceedings from the excellent reports of the daily *Wheeling Register*.

The Society met in the Senate chamber on May 24th, and was welcomed heartily by Dr. George Baird, the chairman of the Committee of Arrangements. Dr. B. B. Leonard, the fraternal messenger of the Ohio State Society, addressed the Society. These interchanges of courtesies between the several State Societies produce the happiest results.

A number of members was added to the roll of the Society. Dr. B. W. Allen, of Wheeling, read an article on "New Remedies in Surgery." Dr. Colly Shriver, of Bethany, read an article on "State Medicine" that elicited much favorable comment. Dr. D. Porter Morgan, of Clarksburg, read a paper on "Retro-Displacement of the Uterus, with Adhesions;" Dr. T. B. Camden, of Wheeling, one on "State Health and Sanitary Science." These papers, with others presented, were ordered to be printed.

At the evening session Dr. James E. Reeves, President, delivered the Annual Address. After alluding to the death of his friend, Dr. H. W. Brock, whom he characterizes as "one of our greatest physicians, and as good as he was great," he referred to the value of associate effort; and then, after discussing severally the following topics, "Medical Progress" and "Sanitary Science," he stated, though West Virginia was one of the youngest States, that it had taken high ground in sanitary police. Very properly Dr. Reeves gives great credit for the success of these reforms to the presence in the Legislature of six physicians in 1881.

Of the amended act of 1882, he says:

"In several particulars, the amended Act of 1882 is an improvement upon the law passed in 1881. 1st. The unconditional appropriation of \$1,500 per annum for the support of the State Board. 2. Specific provision for payment out of the county treasury, for services rendered and expenses incurred by local boards. 3. Exactly reversing the former manner of appointing local boards: the County Court now simply *nominates*, and the State Board of Health may confirm or reject nominations so made. 4. Ample powers are granted local boards to enforce their orders establishing quarantine in any county, district or place therein. 5. 'Itinerant physicians' are required to pay a special tax of \$50 per month and fraction of a month in every county in which they practice, and it is made the duty of sheriffs to collect this tax. Local boards of health have been organized in 52 of the 54 counties composing the State, and the two yet to hear from will soon fall into line."

Dr. Reeves then spoke of the exemption of the State from small-pox, "Common Errors of Hygiene," "Importance of Properly Cooked Food," "Weakness of Country Women." In regard to the close confinement of school children, he says:

"It is a sorrowful fact, and shameful to the management, that our public schools are frequently the chief agencies for

the spread of epidemic and contagious diseases, and thus they plant the seeds of disease while cultivating the intellectual faculties. In many country districts, the school room is used every Sabbath for public worship, and on revival occasions every evening during the week. Immediately after such service the doors and windows are closed, and the confined bad air is shut in to poison the children and their teachers the next morning. Hence the number of pale faces and the frequency of headache in school children. Even in the best regulated schools, the great fault, in spite of all protests and warnings, is the crowding of pupils in rooms where ventilation is a mockery.

These and other questions connected with public hygiene are compassed by our law, and the State Board of Health will diligently investigate them for the guidance of the people."

We copy the following interesting statistics from his address in regard to the number of registered physicians in West Virginia:

"To this time the lists show the number in the different classes as follows: 442 graduates of 'respectable medical colleges' residing in the State, 41 in Ohio, 7 in Pennsylvania, 3 in Maryland, and 1 in Virginia.* Three hundred and fifty-eight practitioners, resident of the State, who had 'been continuously engaged in the practice of medicine for more than ten years prior to the passage of the law;' 11 residing in Ohio, 5 in Pennsylvania, and 1 in Virginia. One hundred and one licentiates of the Board in the State, and 2 in Ohio. These figures show a total of 901 'legally qualified practitioners of medicine, surgery and obstetrics' in the State.

Of the whole number 494 of registered graduates, 460 are *regular* physicians; 23 eclectics and 11 homœopaths! Thus it is shown that our people, whose proud motto is *Montani semper liberi*, believe in tangible doses and sensible effects.

In the ten years' class, all degrees of professional ability and shades of practice—regulars of high and low standing, eclectics, homœopaths (7?), Thompsonians, water-cure doctors, etc., are represented; but the large majority, as in the class of graduates, belong to the regular practice, and some of them do credit to the profession by their industry and su-

* This is an unfortunate record as regards Virginia. There are at least three Fellows of the Medical Society of Virginia who reside in the State of West Virginia. The Editor of this journal is aware of the fact that many respectable doctors, and graduates of Virginia medical institutions are practitioners of note in West Virginia. Every regularly recognized physician should be a member of his State Society.

perior learning. Of course it cannot be doubted that many men in this class have obtained certificates who are not qualified to treat the sick; but while this is unfortunately the truth, it is a consoling fact that this class of doctors will grow less and less as the years go by. Since the 8th day of March, 1881, there have been no additions to the profession except by college diplomas, or examinations by the Board. In other words, the crop of ten years' practitioners was gathered the 8th day of March, 1881, and there can be no further supply."

Dr. Reeves caustically criticised the custom of sundry colleges in granting diplomas in short time and at small cost, and specially referred to a recent graduate at the Columbus Medical College of a matriculate from West Virginia of one or two months' standing; and following up the matter he thus strongly urges the necessity of State Boards of Medical Examiners:

"Surely, it is high time for the establishment of State Boards of Medical Examiners when every nondescript association of doctors, whether for proper or improper purposes, can obtain from State Legislatures a charter for a medical college. The old safeguards to respectability have been shamefully broken down by the rivalry of cheap medical schools, and thus the field of medicine has been thrown wide open to every ignoramus and mercenary adventurer who may desire to enter it and profit thereby.

Medical students generally, and college professors in particular, will please take notice thereof and govern themselves accordingly, that the State Board of Health of West Virginia will not hesitate to go behind the returns and refuse to recognize diplomas granted by any school that does not require, as a condition of graduation, one year's reading with a private instructor, and at least *two* full courses of medical lectures."

After alluding to the "new" Code of New York condemnatory, he concluded his excellent and practical address by urging the physicians of the State more generally to unite with the State Society.

Dr. Albert L. Gihon, A. M., M. D., Medical Director, U. S. Navy, followed Dr. Reeves in an address on "Health; The True Nobility." We regret that we cannot give space to reproduce this classic and almost inimitable address. Wit and humor, coupled with medical learning and experience, ran through his remarks, and it is not surprising that he was heard with liveliest interest. We may not agree with Dr. Gihon in all of his doctrines, but we must say that his way

of setting them forth will interest any reader. Dr. Gihon is in the Navy, and hence should not be an authority on corsets. He may not know how to fit them on properly.

On the second day's session several papers were read. The Society passed resolutions adverse to the new code of New York, and instructed its representatives to the American Medical Association to oppose any changes in the old code.

The following officers were elected for the ensuing year: President—Dr. B. W. Allen, of Wheeling, who was styled the Nestor of Surgery of West Virginia; First Vice-President—Dr. C. Shriver, of Bethany; Second Vice-President—Dr. Grant, of Cameron; Third Vice-President—Dr. Manown. Dr. S. L. Jepson, of Wheeling, was unanimously re-elected Secretary, and Dr. J. A. Campbell Treasurer.

The valedictory address of Dr. Reeves was well-timed, and in every way appropriate.

The next annual session of the Society will be held at Grafton.

Medical Society of North Carolina.*

FIRST DAY—*Morning*.—The Society of the State assembled in Concord, N. C., May 9th, 1882. The President, Dr. Thomas F. Wood, called the meeting to order. The address of welcome was made by Mr. Richard C. Puryear.

The Committee on Credentials was appointed. About 50 members were present.

Dr. Eugene Grissom, of Raleigh, N. C., called attention to the fact that the name of Dr. J. D. Bellamy, of Wilmington, an Honorary Member of this Society, has, by some error, been omitted from the published list. He moved that it be restored, which was unanimously agreed to.

Dr. G. G. Thomas, of Wilmington, presented the following correspondence from the New Hanover County Medical Association:

"To the Medical Society of the State of North Carolina:

Having been appointed by a Committee for the purpose, at a meeting of the New Hanover County Medical Association, held on the 25th inst., of directing your attention to an innovation in ethical law recently enacted by the Medical Society of the State of New York, we invoke such ac-

* We abbreviate the Minutes of these Proceedings from the excellent report made by the *North Carolina Medical Journal*, May, 1882.

tion on your part as will lead to its repudiation by the American Medical Association.

The article to which reference is made is as follows :

‘Members of the Medical Society of the State of New York and of the medical societies in affiliation therewith may meet, in consultation, legally qualified practitioners of medicine. Emergencies may occur in which all restrictions should, in the judgment of the practitioner, yield to the demands of humanity.’

In the State of New York, any person having a diploma, by the mere act of registration, becomes a legally “qualified practitioner.” There is thus let loose upon its citizens a class of men whose tenets are opposed to those of regular medicine, consultation with whom is interdicted by the Code of Ethics of the American Medical Association.

In consequence of the comparatively few legally qualified medical men, and the paucity of irregular practitioners, the first clause is, except in one or two localities, practically inapplicable to North Carolina. It is the principle involved which we would have you scrutinize and condemn.

The rule enunciated by the American Medical Association, Art. IV, Sec. 1, appears to us to be founded upon correct reasoning. It is as inconceivable that a regular practitioner and one of an exclusive school should concur upon a plan of treatment for an invalid, as a Christian and Voodoo priest should arrange conjointly a course of devotional exercises. Their belief is dissimilar. Should they agree, one necessarily becomes a convert to the opinions of the other; and being thus devotees at the same shrine, they may and ought to fraternize. If, however, while adhering to their respective doctrines, they should make pretence of fraternization, they would be guilty of (term it what you please) dissimulation—bad morals—unethical conduct.

The second clause appears more objectionable, if possible, than the first, since consultation is made mandatory rather than optional in certain contingencies. The assumption upon which the precept is founded is that an emergency may demand a sacrifice of truth. The premise being false, the argument fails. If the premise were true, it would not, in our opinion, apply, for the reason that we cannot conceive an emergency where it would be impracticable to assume the position that we are willing to render professional assistance when required, but that we cannot do violence to our moral sense by assuming to consult with persons, to agree with whom, is to imperil, or, rather, to sacrifice our principles.

Wm. J. Love, Geo. Gillett Thomas, F. W. Tomas, W. W. Lane, *Committee.*"

It was moved by Dr. J. A. Reagan, of Weaverville, that the report be referred to a committee of three. Carried. The following were appointed: Drs. W. R. Wilson, of Townesville; J. L. Nicholson, of Richlands; T. D. Haigh, of Fayetteville.

The Committee on the Correspondence of the New Hanover County Medical Association on Medical Ethics, offered the following resolution, which was adopted:

"Resolved, We hereby re-affirm our strict adherence to the Code of Ethics of the National Medical Association, and request our delegates to its next meeting to further all efforts that may be made in that Association to compel its members to a strict adherence to the mandates of our Code of Ethics."

Afternoon.—The Committee on Finance report a balance in Treasury \$145.00.

"Your Committee respectfully urge that all members whose arrearages have exceeded three years' dues shall be notified by the Treasurer, and if they fail to respond in 30 days, they shall cease to be members of this Society, and their names be erased from the Revised Roll."

Geo. Gillett Thomas, J. A. Reagan, J. D. Roberts, *Committee.*

Dr. A. W. Knox, of Raleigh, Chairman of the Section on Obstetrics and Gynæcology, read his report. It was referred to the Committee on Publication.

Dr. Grissom said he was very much instructed by Dr. Knox's exhaustive paper, but more particularly was he interested in the report of the case of recovery from insanity, after ovariectomy. He would like to inquire of Dr. Knox if the operation was directed especially to the cure of insanity. It was a matter of great moment to collect and compare and analyze all cases of ovariectomy, oöphorectomy, etc., for the radical relief of diseases of the mind.

Dr. Knox replied from memory that he believed that the ovariectomy was not undertaken for the relief of insanity; but that the ovariectomy being necessary, was resorted to, and with the recovery of the patient from the operation, her reason was restored.

Dr. George G. Thomas, of Wilmington, Chairman of the Section on Materia Medica, made his report. Dr. Haigh remarked upon the merits of this report, and the amount of discriminating research exhibited in it, and moved that it be referred to the Committee on Publication. Carried.

SECOND DAY—*Morning*.—Dr. J. P. Beall, of Greensboro, regular Essayist, read an instructive and earnest paper on the subject of *Preventive Medicine*.

The paper of Dr. Beall was referred to the Committee on Publication.

Conjoint Session of the Society and the North Carolina Board of Health.—The hour (11 o'clock A. M.) having arrived, the President of the Society called on Dr. M. Whitehead, of Salisbury, the President of the Board of Health, to preside over the meeting.

Dr. Whitehead explained that it was the custom of the Society to hold these conjoint sessions, in order that the work of this auxiliary body might be properly brought before the members present. It was important that all should be acquainted not only with the work already done, but what was proposed to be done, and that this struggling auxiliary of the Society should receive a proper support.

The Essay of Dr. Beall was a very excellent introduction to this session, and he would now ask the attention of the Society to the yearly report of the Secretary of the Board, Dr. Thomas F. Wood.

The Secretary explained that by a resolution of Dr. W. W. Gaither, at the Asheville meeting, in 1881, the duty of appointing a committee from every county in the State to canvass in the interest of prospective legislation for the Board of Health, devolved on him in his double capacity of President of the Society and Secretary of the Board of Health. He learned though, that the extra session of the Legislature, in March, 1882, which was contemplated by the Governor, was not concurred in by his council, and therefore the appointments were delayed until this meeting. He furthermore desired to announce that if any gentleman receiving his appointment as Committeemen would not be able to undertake the work in earnest, he would signify this fact, that a successor could be appointed without delay.

No other business appearing before the Conjoint Session, it was adjourned *sine die*, and the regular session of the Society resumed.

Responding to the call by the President for voluntary papers, Dr. R. L. Payne, Jr., of Lexington, read one entitled "The Cause of Organic Stricture, with some suggestions for Treatment," which was referred to the Committee on Publications. Dr. Pittman, of Tarborough, made remarks on the value of slippery elm bougies for the dilatation of stricture. These bougies are easily made, and should be nicely finished.

After soaking them a short time in water, they are ready for use.

Dr. A. G. Carr, of Durham, in referring to the statement by Dr. Payne, that he was not prepared to write about the electrolytic treatment of stricture, said that he had become quite interested on this point, and that he inquired of Dr. E. L. Keyes, of New York city, as to his experience. He was informed that Dr. Keyes had employed it, and he at first thought it was successful, but afterwards abandoned it, as only affording temporary relief, the stricture always returning.

The President: It is not proper that such a contribution to the surgery of stricture should be received without a word of commendation from the Society. There were few more important subjects which engage us practically than the Surgery of Stricture, and Dr. Payne's views are characterized by an intelligent conservatism.

Prof. Otis, of New York, had made valuable contributions to the literature, as well as to the science and art of the surgery of stricture, and has succeeded in impressing the American profession with his views to a very considerable extent; but after all it is questionable whether he has done more for the surgery of stricture by his teachings than for lithotrity. It was his demonstrations of the dilatability of the urethra that paved the way for Bigelow's rapid lithotrity, and if no other good result is effected, this alone would entitle him to a conspicuous place in this department of surgery.

But the medical profession yet remained to be convinced upon the relative merits of urethrotomy and forcible and gradual dilatation, as these methods are still undergoing trial. As pointed out in Dr. Payne's paper, all of these methods have, in certain cases, their proper place; but do what we will, most strictures of small calibre will require dilatation during a very long period, if not for a lifetime. All treatment has its defects, as is evidenced by the numerous relapses. It is evident, though, that a discriminating and judicious selection of some one of the methods now in vogue is capable of producing more satisfactory results, than the old plan of gradual dilatation by means of gum bougies.

The recurrence of the gleet discharge in patients who have been operated upon is many times the result of the very operative procedures we adopt. For instance, we divide or cut through a stricture and dilate up to the maximum calibre of the urethra, as indicated by the measurement established by Otis. The patient is instructed to use a sound at stated intervals. Now, most persons suffering

with stricture have a morbid anxiety as to the possibility of maintaining the proper calibre, and also as to every discharge which may show itself. Attention is constantly drawn to the urethra, and in his anxiety the patient resorts to the sound as the source of relief; for, adopting the current doctrine that a gleet discharge is the index of a stricture, he resorts to the sound to overcome it. He repeatedly passes the largest sound he has been instructed to use, and so irritating the prostate by these frequent stretchings, he brings on a prostatic discharge, which is set down as the discharge of gleet. This is not an exaggerated statement, and has occurred many times under my observation.

Dr. Payne has dwelt instructively on one of the methods of dilatation which has met with great success in my hands. He associates the name of Dr. Brinton with the method of gradually dilating tight and tortuous strictures, by means of filiform bougies. The method is lucidly described by Mr. Reginald Harrison, of Liverpool, Eng. (*Lectures on Surgical Disorders of the Urinary Organs*, p. 70, 2d Ed.). It consists in passing filiform bougies (usually made of whale-bone) into the urethra. If it is remembered that strictures are sometimes eccentric, with the opening not in the axis of the urethra, the advantage of a fine and flexible instrument as an explorer and a guide, is at once appreciated. If the first bougie does not pass readily, it should be slightly bent to meet the emergency. The instrument makers prepare for us whalebone bougies twisted in various ways—spiral, and at various angles on one end, and straight on the reverse end. These are to be introduced by a rotary motion, or, as Mr. Harrison says, by “twizzling” them between the finger and thumb. Should the first one not pass, but stick in a lacuna or make a false passage, let it alone, and continue attempts at introduction, until finally all the false passages being closed there is but one direction for the bougie to take, and that directly through the only remaining opening. Now, after the bougie is cleverly engaged in the urethra, all the others may be withdrawn, and this used as a guide whereby to enter the stricture with a dilator, or urethrotome.

As suggested by Dr. F. E. Daniel in the Mississippi Transactions, the busy country practitioner will find the employment of fiddle-strings an admirable substitute for whalebone sounds in an emergency. It is only necessary to round off the ends of the cat-gut in the flame of a lamp, and rub off the charred end.

Another admirable assistance to the physician in the dila-

tation of stricture is the employment of a full head of urine. A stricture patient of mine recently complained for some days after the weekly use of a No. 14 sound, that he had an uncomfortable discharge. One night while taking his weekly hot bath, preparatory to dilatation, he found that his sound was not at hand. His bladder was very full, and the hot water relaxed the parts so that he could, with difficulty, retain his water. He resisted though, and finally when he could no longer resist, he found that the force of the urine dilated his urethra as satisfactorily and more pleasantly than the sound, as it was not followed by discharge. He has since used only this method. It is a rational way, at least, and if as declared by Sir Henry Thompson, that the urethra is a valve having its opening end at the vesico-urethral end, then dilatation from the natural direction would be from behind forwards, as in the hydrostatic method. There is nothing new in all this, nor is it devoid of danger in some cases, but it is well to consider all the means at our command in those emergencies which must occur to physicians practising in the country.

Dr. R. F. Lewis, of Raleigh, presented a negro boy for the examination of the Society, pointing out the *congenital absence of the external auditory canal* and of the lobes of the ear.

Afternoon.—The call for voluntary papers was responded to by Dr. Picöt, who read a report by Dr. R. H. Lewis, of Lumberton, of a "Case of Forcible Separation of the Right Arm from the Body."

Dr. Gaither could not agree with the reporter, that there was no shock. He did not think it possible to escape it after such an injury.

Referred to the Committee on Publication.

Dr. W. W. Gaither read a report of some miscellaneous cases occurring in his practice, which was referred as above.

Dr. Charles O'Hagan, of Greenville, introduced for discussion the subject of "*Typhoid Fever, as Regards its Etiology and Treatment.*" In Pitt and the adjoining counties in 1879 there was absolute freedom from malarial fever. In the entire valley of the Tar River there was less malarial fever than in the Valley of the Connecticut, if he could judge by the report of the Secretary of the Board of Health of that State. The following Spring we had an epidemic of *Influenza*, and from July, typhoid or typho-malarial fever has existed up to the present time. It seems to be the current opinion that the fever is probably due to the decomposition

of animal matter. He could not believe that this theory was entirely true, for he had known cases to occur in localities where there was no visible agent of this sort at work, and where there was good water and no sewage effluvia. The theory was not entirely satisfactory.

It is the belief of some that malarial influences are antagonistic to typhoid fever, but this is not so, for the diseases frequently co-exist in the same localities side by side, and also seem to be mixed as in the so-called typho-malarial fever. This latter term he did not like. It was making a new disease of a really well-known one, common in all tidewater malarial regions.

Is typhoid fever contagious in any degree, he would ask? If we can determine its communicability by infection or contagion, means of isolation should be adopted. He had seen typhoid go through households, and even entire settlements, but what the media of the disease were he had not settled in his mind. He thought that it was wise to prevent free communication of the well with the sick—to attend carefully to the hygienic surroundings, as much for the sick as for the well.

In his observation, the disease never reaches its crisis until the twenty-eighth day.

As for the treatment, quinine fails to cut short the fever. Nothing is so serviceable in the reduction of temperature as the use of cold water. He employs water about the temperature of water freshly drawn from the well. It could be used by simple affusion, but he preferred the use of the wet pack. Tympany and diarrhœa are frequently troublesome. Opium was the thing to relieve the diarrhœa. As to the diet, the patient should be confined rigidly to a course of nourishing fluids.

Dr. A. G. Carr, of Durham, said the diagnosis of fevers in general has always perplexed him. One teacher will say that the lenticular rose-colored spots are the only pathognomic signs of typhoid, while others thought that a failure to find these spots would not necessarily exclude it from such a diagnosis—many cases going through their course without any such signs. He called those cases typhoid only that exhibited the rose-colored spots, and consequently he had seen very few genuine ones. Some authors teach that the diurnal variation of the thermometer is a sufficient guide, but he thought that if thermometry was to be a guide, it was to be determined by our future knowledge on the subject, rather than by what we at present know.

Dr. H. W. Faison, of Faison, believed that typhoid fever must have local peculiarities. He was tempted to believe that typhoid fever in North Carolina differed from the same disease in New York. So in pneumonitis. In his section of the State the malarial impression is so strong that it failed to show that clear, classical outline given in the text-books. He believed that the thermometer was an accurate means of diagnosis as well as prognosis. The treatment of the disease could not be laid down in inflexible rules. It was necessary day by day to meet the exigency of the day. There was but one rule that was undeviating, and that was to see that the patient was properly nourished. For this purpose nothing excelled animal broth and milk.

Dr. J. D. Roberts, of Goldsborough, thought that sufficient stress had not been laid upon the cause of typhoid by the use of polluted drinking water. He cited a clear instance in which he had treated typhoid fever in a household from using foul water from a well.

Dr. O'Hagan did not deny that the pollution of drinking water was potent to engender the disease, but he was of opinion that the detection of the peculiar element has not yet been, and may be never would be, accomplished. But he could speak more confidently about the communicability of the disease; he did not see how this point could be doubted.

Dr. J. W. Jones, of Tarborough, said we cannot be very positive how the disease originates with our present knowledge. When we see much typhoid fever prevailing, we see very little malarial fever. Some light is thrown on the subject by our ability to cure malarial fever with quinine, and our failure to accomplish anything by it in typhoid. In the fever we call typho-malarial we have gastric inflammation. The gastric symptoms are very prominent, but there is no disease of the intestinal glands. One thing he had noticed which he would mention incidentally, that patients affected with rheumatism are exempt from typhoid fever. How account for the typhoid fever in mountains where the air and water are pure, and where there can possibly be no sewage influences. We are willing to accept the theory of sewage contamination for cities, but that drives us to the invention of some other cause operating in the isolated mountain farm house.

Dr. M. Whitehead, of Salisbury, had seen the typhoid fever ravage two or three counties, in an instance in which he was able to trace its very beginning. In eight months he had seen 700 cases of typhoid in a very severe form in the

counties spoken of. He did not believe the disease was contagious, but it was infectious. He objected to the term typho-malarial fever. During the war, Assistant Surgeon Woodward gave this name to the fever that was prevailing so extensively in the Chickahominy bottom. But it was a misnomer and a misleading one. He believed that the fever described by Dr. Woodward under this name was the bilious adynamic fever of Cullen and the older writers. Typhoid fever was a specific disease, characterized by rose-colored spots on the abdomen and thorax, and by ulceration of the glands of Peyer and Brunner, and nothing else should get the name.

Dr. F. M. Henderson, of Concord, had under his charge in the First North Carolina Confederate Hospital, patients sick with camp fever, or typho-malarial fever. Post-mortem examinations revealed diseases of the glands of Peyer and Brunner.

Dr. Reagan, of Weaverville, was certain the disease was contagious.

By the President: The nomenclature of fevers had attracted the attention of the writer for many years. No real refinement of diagnosis commenced until Louis pointed out the pathological differences between typhoid and typhus, and so established an advanced point in the whole system of nosology, in fact transferring nosology from the domain of speculation. Typhoid is almost universally regarded as a specific fever, having a constant pathological entity in the disease of the intestinal glands. Thus Dr. George B. Wood calls it enteric fever, and Trousseau, dothinerterria—each term constructed to impress the predominant lesion. Still some other authors had not been so willing to accept whole and entire this naming, because they found it more convenient to comprehend all fevers whose characteristic feature is stupor, by a term signifying it. It is not often that one sees a case of typhoid corresponding in all of its features to the classical account of the text-books, and this may be said of all diseases; but there is a group of coarse but distinctive phenomena which serve to keep clearly in our minds the general features. The term typho-malarial fever may not be any better than the old term, bilious-adynamic fever, but it expresses a generally received idea, and was intended to show that the continued malarial fevers have a constant lesion of the intestinal glands. He was inclined to think the line of demarcation ought to be made at a different place. He believed that true enteric fever furnished immunity to the

person attacked. against a subsequent attack, almost as surely as small-pox protected against a second attack. On the other hand, the continued form of malarial fever afforded no such immunity. It was convenient to use the prefix *typho* to indicate the stupor attendant upon the disease, even if the intestinal lesion was constant. If typho-malarial was to be applied to all fevers commencing as sharp remittents, and subsiding in a continued form, then the term was inaccurate. But there is without doubt a typhoid fever, having distinctly marked malarial features, and there is an adynamic bilious fever, which has no specific protective power, and for this we can reserve the name adynamic-malarial fever.

Of the cause of typhoid fever there was no uniformity of opinion. Teachers in the large cities think they see a causative element in sewage and the faecal dejections of typhoid patients, while physicians in the country find it hard to accept this idea. In our eastern counties we have a typhoid fever rarely agreeing with the classical description, and not recognized as contagious. This fever is the acclimating fever of the German population in Wilmington. It is not considered contagious, and there is no difficulty in getting nurses for patients attacked with it as easily as for other diseases. In the mountains, though, the disease is very serious, and so decidedly contagious that it often creates a panic in families, and makes it difficult to get a nurse except from among those who have once had the disease. It would seem, therefore, that there is a material difference in the two fevers, and it would be difficult to admit that there is constant causative element in the eastern and western types of the fever. But as to a causation in disease, we know extremely little, and we are not much farther away from it in typhoid than other fevers. Filth, though, is a factor in all zymotic diseases. It either causes disease, or it intensifies it when it is established. Filthy surroundings in a solitary case of fever or diphtheria may only increase the receptivity of the persons who are in the nearest contact with the sick; but whether this is all the harm resulting, or whether disease germs spring *de novo* from it, it is equally important to enjoin the strictest attention to hygienic surroundings.

As to the diet of a typhoid patient, it is a common error to tax the stomach and intestinal digestion of the typhoid patient with too much nourishment. It stands to reason that the idiosyncrasy of a given patient's stomach is not overcome by the typhoid state, and that if any given article of food does not agree with him when he is well, it is not to be ex-

pected to answer for him when he is sick. Feeding with milk requires much judgment. It cannot be denied that milk is the nearest approach we have to a perfect nourishment, but it would be folly to give even milk to a typhoid patient with whom it did not agree when he was well. Sir Wm. Jenner pointed out some time ago that milk was not the best diet for typhoid patients. One pint of rich milk was equal to a mutton chop and as hard to digest. This does not signify that milk is to be condemned as a diet, but to be given with discretion. Water and lime water could often be added with advantage, as our typhoid patients generally get far too little water, and lime-water tends to prevent the formation of solid curds in the stomach. Peptonized food is attracting much attention. It is a rational way of giving nourishment. The design is to introduce a food so nearly resembling natural peptone as to tax the stomach and duodenum the very least. Expensive preparations are on the market, but the physician could easily extemporize it, by the artificial digestion of meat and meat juice with pepsin and pancreatin, the minute directions for which are given in Dr. Robert's (of Manchester, Eng.) famous lectures.

Another article of diet, beef tea, an old one by a new method, is thus prepared. Mince lean, juicy beef and place it in a water bath, the temperature of which is not raised above the point that the finger could bear a moment. Digest it for an hour carefully not exceeding 108° F. Then put the meat thus prepared in a small fruit or curd press, and squeeze out all the juice. In this way all the muscle juices and albumen are separated, giving a product resembling blood more than the beef-tea made by the old process of digesting at the boiling point, and probably much more nutritious.

Night.—The Society assembled in the Court House to listen to the Annual Address by Dr. A. W. Knox, of Raleigh. The citizens of Concord responded to the invitation to be present, by a full house. The subject of the address was *Vaccination*. The history of the practice was traced from the time anterior to Jenner's discovery. He mentioned the historical fact of Farmer Benjamin Jestey, of Downshay England, following the tradition of his neighborhood, inoculating his family with cow-pox for the prevention of small-pox. But he did not succeed in impressing the people of his time sufficiently to establish the practice. It was due to the genius of Jenner to interpret the meaning of the exemption of milk-maids from small-pox who had taken the cow-

pox from the cattle. He it was, who in 1796 actually demonstrated the practice by taking the lymph from the hand of a milk-maid, inoculating his own son, and then afterwards proving by the crucial test of small-pox inoculation, the absolute protection obtained by the vaccination. A group of his early cases was brought together in his first great work entitled "An Enquiry into Variolæ Vaccinæ," and by this touch of a master hand the beneficent system was given to the world. The speaker dwelt upon the protective power of vaccination, proving by statistics what immense good had been done by means of it. He also showed how foolish and wrong the anti-vaccination movement was. He referred to Bergh's insane tirade on the *North American Review*, and the incisive and conclusive reply of Dr. H. A. Martin. He discussed the propriety of compulsory vaccination, and the difficulty of accomplishing it in communities where there are large numbers of negroes.

On motion of Dr. A. Holmes, thanks were tendered to Dr. Knox for his address, and it was referred to the Committee on Publication.

THIRD DAY—*Morning*.—The Chair appointed the following Chairmen of Sections: Dr. R. L. Payne, Jr., of Lexington, *Surgery*; Dr. H. B. Furgerson, of Littleton, *Therapeutics and Materia Medica*; Dr. Geo. W. Long, of Graham, *Practice of Medicine*; Dr. F. A. Crowell, of Monroe, *Microscopy and Pathology*; Dr. J. M. Hadley, of La Grange, *Obstetrics and Gynæcology*; Dr. A. G. Carr, of Durham, *Diseases of Children*.

Dr. H. W. Lilly, of Concord, exhibited a case of *Encephalocoele* in the person of a little girl. He spoke of the nature of the case, of the strong temptation to interfere surgically for its relief, and also the great dangers attending such interference. He also read letters from Drs. Gross, A. C. Post and Van Buren, advising that in some cases the elastic bandage might be successfully used to accomplish gradual constriction, but the propriety of any interference in this case was very doubtful.

The Committee on Nominations made the following report: For *President*—Dr. J. K. Hall, of Greensboro'. *Vice-Presidents*—Drs. A. W. Knox, Raleigh; J. M. Hadley, La Grange; E. S. Foster, Louisburg; John Whitehead, Salisbury. *Treasurer*—Dr. A. G. Carr, Durham. *Secretary*—Dr. L. Julien Picôt, Littleton. *Orator*—Dr. W. R. Wilson, Townesville. *Delegates to Virginia Medical Association*—Drs. A. M. Lee, Clinton; R. Lee Payne, Jr., Lexington; W. C.

Murphy, South Washington; Willis Alston, Littleton; John Wilson, Milton. *Board of Censors*—Drs. Charles J. O'Hagan, Greenville; N. J. Pittman, Tarboro; J. J. Summerell, Salisbury. The report was adopted.

President's Address.—The history of medical societies in North Carolina was reviewed, beginning with the society founded in 1799 or 1800. Even then there was great care taken in the selection of members, all applicants for membership being examined in open meeting by the Board of Censors. This board was the germ from which the present Board of Medical Examiners sprang. The work of the Board of Examiners was commented upon, showing the reflexive influence of their examinations upon the medical colleges, and upon the tone of the profession in the State. The Board has attempted to make the standard progressively higher, but had not thought it wise to go in advance of the standard set by the best medical colleges in the country, although he intimated that there was great improvement needed before the standard would be what was desired. He urged the separation of the teaching and the diploma-granting bodies, as the great desideratum in medical education. The present Board had examined 142 candidates from 23 different colleges. Of this number 27 had been rejected, or about one in seven. He thought the time had come when the law should be changed requiring the successful candidate to receive five or six votes in seven, instead of four in seven, as now provided, and that it should be a misdemeanor to practice without this license.

He believed the time had not arrived in this State for the establishment of a medical college, and he hoped it would not be undertaken until an endowment sufficient to support professors independently of the fees of students, had been secured.

The other topics dwelt on by Dr. Wood were the present status of medical education, the necessity for the endowment and encouragement of original research; the cultivation of preventive medicine; the dangers of specialism; the proposed amendment of medical ethics as undertaken by the New York Medical Society. Lastly, he said that it was as late as 1820 when quinine was first discovered; it made an era in chemistry and therapeutics; and only sixty-two years later we get the startling announcement that quinine has been made by a French Maumené, by synthesis.

The address was referred to the Committee on Publication.

Tarboro was unanimously selected as the place of meeting, and the third Tuesday in May as the time.

Dr. Paul B. Barringer, of Charlotte, N. C., was elected Essayist for next year.

Afternoon.—The following resolution, introduced by Dr. O'Hagan, was carried:

Whereas, One A. D. Lindsay, M. D., whose postoffice is Kernersville, Forsythe county, N. C., and who claims to be a member of the North Carolina Medical Society, has issued to the public a card setting forth the virtues of a certain nostrum, called by him Analeptine, the formula of which he professes to publish; and whereas, the wording of the card exhibits gross ignorance of the first principles of medical knowledge and savors strongly of the tricks of the average medical charlatan,

This is to warn the public in the first place that the Medical Society of North Carolina, because of the above violation of Arts. 3 and 4, chap. 2, of the Code of Ethics of the American Medical Association, hereby expels from membership in this Society, said A. D. Lindsay, and inform the public that he is no longer in fellowship with it.

And this Society hereby warns the public that any confidence which might be given to said Lindsay because of his supposed membership in this body, is entirely unworthy, and the North Carolina Medical Society hereby utterly repudiates both him and Analeptine

N. J. PITTMAN, }
C. J. O'HAGAN, } Board of Censors.

Dr. Geo. G. Thomas introduced the following resolution, which was unanimously carried:

Resolved, That so much of the rule relating to the tariff of Insurance fees, requiring the payment of \$5 for certificate of one physician as to the professional standing of another, be repealed.

Dr. Wood stated he had pledged \$30 for the support of the Index Medicus. He did this because he believed the Society would approve his action. At any rate it was helping forward an undertaking that was of the greatest moment to the interests of medical literature.

On motion of Dr. Haigh, the Society endorsed this action of the ex-President, and directed the amount of \$30 to be paid.

Analyses, Selections, etc.

Total Excision of the Knee-Joint for Caries.—Wm. Wallace, M. D., of Pittsburgh, Pa., reported a most interesting case to the Alleghany County Medical Society, May 17th, 1882, which we almost copy literally from the *Pittsburgh Medical Journal* for June, 1882. The patient, John F., German by descent, aged thirty-three years, a puddler, was troubled for many years with a movable body of the size of a grape in the right knee-joint, which caused severe pain and prevented locomotion whenever it got beneath the patella and as long as it remained there. There was no history of a previous inflammation to account for the origin of this movable body. Five years ago he fell upon the knee, and the injury excited intense synovitis, which progressed to suppuration and disorganization of the joint. He was under the care of a number of excellent physicians, and had been but recently discharged from the Western Pennsylvania Hospital, when he came under my care about May 1st, 1879. After his two years of constant suffering and confinement to either bed or crutches, he stated that the only hope of ultimate recovery proffered by his advisers was by means of an amputation.

At this time the knee was ankylosed in a semi-flexed position; it was enormously enlarged by ossific hypertrophy and exceedingly painful; numerous fistulous openings of sinuses leading to carious bone surrounded the joint and lower half of the femur, and from them suppuration was profuse. The patient was greatly reduced in strength, and could only move about the room in a sitting posture, resting his hands upon the floor. Despite his sufferings and miserable surroundings he was hopeful, and cheerfully acquiesced in the operative measure suggested.

On May 3d, 1879, assisted by Drs. W. H. Daly, W. J. Estep and R. C. Gallaher, I excised the knee-joint, the patient being under the influence of chloroform. The **H** incision was made, the perpendicular arms extending along the sides of the knee for eight inches, and the transverse connecting incision passing through the ligamentum patellæ. The flaps were dissected up, and the lateral ligaments divided, when the ankylosis was broken up by forcibly flexing the leg. The narrow blade of the saw devised by Mr. Butcher was then passed behind and above the condyles of the femur, and an inch and a half of the bone was removed

by sawing from behind forwards. The sawn end of the bone exhibiting pus and a carious surface an additional section, one-half inch in thickness was removed, when the exposed osseous tissue appeared healthy. A section of the head of the tibia, three-fourths of an inch in thickness anteriorly, was then removed in the same manner. The patella was dissected out from its attachments and removed. The flaps were replaced and united by sutures, a muslin tent for drainage being passed through the wound from side to side. The limb was then extended fully upon a posterior sheet-iron splint, my intention being to secure an artificial joint if possible.

With the exception of the places occupied by the tent the external wounds healed by the first intention. The subsequent dressing consisted of injections of carbolated water and oil. The case progressed favorably, and in three months the patient was able to walk with the support of a Thomas knee splint.

Five months after the excision I removed a sequestrum from the middle of the shaft of the femur two inches in length. The knee-joint was strong, painless and healed, but the limited necrosis of the middle of the shaft of the femur continued to incapacitate him for several months. There is still a sinus at that point leading to a small portion of denuded bone.

This man has been walking upon the limb for about two years without any artificial aid, and for several months has been following the avocation of a puddler, and walking to and from his home near Allentown to one of the South Side mills. Considering that he wears an ordinary sole to his shoe, the halt in his gait is trifling, and could be obviated by the use of a thicker sole. The limb is strong and well, and he can slightly flex and extend it by the power of the muscles alone. He never has any pain except immediately before a rain. My endeavor to obtain an artificial joint has practically failed, but there is no ankylosis, and he has slight power of flexion and extension, while for the purpose of locomotion the limb has all needful strength.

The pathological specimens embrace the whole knee-joint, the condyles of the femur, head of the tibia and patella. Measured in their natural relations, the extent of bone removed is more than two and one-half inches in the dried state. The joint surfaces are corroded, honey-combed and disorganized, the cartilages are gone, and the entire external surface is thickly studded with osteophytic deposits.

The movable body was found attached to the articular surface of the tibia. It consisted of bone, and was of the size of a bean, its upper and lower surfaces being slightly concave.

Opium Habit Treated Successfully by the Avena Sativa, or Common Oats.—*Concentrated tincture of avena sativa* has been strongly recommended by Dr. E. H. M. Sell, in a paper read before the State Medical Society of New York, and published in the *Medical Gazette*, for the cure of the opium habit. This preparation is made by making an alcoholic tincture of common oats, distilling the alcohol off, and leaving an impure extract. As different extracts require different re-agents for precipitation, the selection of those must be left to the judgment of the chemist. One ounce of the resulting precipitate must be dissolved in ten ounces of alcohol, and this forms the concentrated tincture *avena sativa*. It is prepared by B. Keith & Co., 41 Liberty street, New York city.

This tincture is thought to be a powerful nerve tonic and stimulant, laxative and diuretic, and has been used with success in epilepsy, inebriety and other derangement of the nervous system. In the treatment of the opium habit, however, it is a remedy *par excellence*. He details quite a number of cases in which the remedy has been used with success. From six to thirty drops may be administered three or four times a day, before meals, and at bed-time; in hot water during the day, and in cold water at night.

In the *opium* or *morphine habit*, as well as in *inebriety* or *alcoholism*, the best rule is to give the *avena* in hot water with the same frequency that the patient was accustomed to take his opium or morphine, *i. e.*, as often as the system demands it, and in doses sufficient to produce the desired effect. As all cases do not require the same amount, trial and experience will be the best guides. It is necessary, however, to bear in mind the physiological action of this remedy, which is to produce congestion of the base of the brain. A *fullness* at the *base of the brain* will indicate that the *dose* dare not be increased, and a *pain* in that region suggests that an *overdose* has been given. The diminution of the dose regulates itself by the above symptoms. As long as the system demands the remedy, it must be administered in doses sufficient to supply that demand, and whenever given in larger doses than required, it will manifest itself by its symptoms.—*Pittsburgh Medical Journal*, June, 1882.

The Proper Time for Work.—The habit of writing and reading late in the day and far into the night, says *The Lancet*, “for the sake of quiet,” is one of the most mischievous to which a man of mind can addict himself. The feeling of tranquility which comes over the busy and active man about 10:30 or 11 o’clock ought not to be regarded as an incentive to work. It is, in fact, the effect of the lowering of vitality consequent on the exhaustion of the physical sense. Nature wants and calls for physiological rest. Instead of complying with her reasonable demand, the night-worker hails the “feeling” of mental quiescence, mistakes it for clearness and acuteness, and whips the jaded organism with the will until it goes on working. What is the result? Immediately, the accomplishment of a task fairly well, but not half so well as if it had been performed with the vigor of a refreshed brain working in health from proper sleep. Remotely, or later on, comes the penalty to be paid for unnatural exertion—that is, energy wrung from exhausted or weary nerve-centres under pressure. This penalty takes the form of “nervousness,” perhaps sleeplessness, almost certainly some loss or depreciation of function in one or more of the great organs concerned in nutrition. To relieve these maladies—springing from this unexpected cause—the brain-worker very likely has recourse to the use of stimulants, possibly alcoholic, or it may be simple tea or coffee. The sequel need not be followed. Night work during student life and in after years is the fruitful cause of much unexplained, though by no means inexplicable, suffering, for which it is difficult, if not impossible, to find a remedy. Surely morning is the time for work, when the whole body is rested, the brain relieved from its tension, and mind power at its best.

[While perhaps there may be nothing new in this selection, which we take from *The Lancet*, through the *Medical Gazette*, yet it may be well to keep before the profession such ancient and sound doctrines.]

Analysis of Bitters.—Dr. H. W. Vaughan, State Assayer of Rhode Island, has made a report on the analysis of the various “bitters” on the market, classifies them in three divisions: 1st. Beverages, as Hostetter’s, Baker’s, Drake’s, or which contain from 18 to 43 per cent. of alcohol. 2d. Alwood’s Quinine Bitters, Luther’s Temperance Bitters, or from 16 to 40 per cent. 3rd. Professedly designed as medicines, but very well suited for forming a taste for all kinds

of strong drink, vary from very strong to very weak; in this class he finds Richardson's, Warren's, Hoffman's, Puritan, etc. It would seem, therefore, that even the good names of Temperance, Puritan, Vinegar, etc., when applied to bitters are used in the Pickwickian sense.

Case of Molluscum Sebaceum of the Scrotum.—John A. Oesterlony, A. M., M. D., Professor of the Principles and Practice of Medicine in the Kentucky School of Medicine, Louisville, Ky., in a communication to the *Medical Herald*, April, 1882, gives the following interesting report of this rare disease:

Anderson P., white, married, aged thirty-eight, farmer, came under my observation in February, 1882, and gave the following history: His general health has always been good; nothing like this affection was ever known to have occurred in any member of his family. Five years ago he first noticed a small rounded growth on the right side of the scrotum near its junction with the penis. It steadily but slowly enlarged, and was soon followed by others, and new ones are forming all the time. At first they were very small, hardly perceptible to the eye, and could barely be felt when pressing the skin between the fingers, but all are increasing in size and, he thinks, at a more rapid rate than at first.

Present Condition.—The patient has light hair, blue eyes, a fair, clear complexion, with good capillary circulation; his skin is clean and there are no comedones or other indications of disturbance of the sebaceous glands of the general integument. He is five feet eight inches tall, and weighs only 130 pounds, but his lungs are sound and the pulse is 76; respiration 18 per minute. He bears the marks of several wounds received while he was a soldier in the Union Army during the late civil war. One bullet entered the anterior aspect of the left thigh in the middle, and passing through, emerged posteriorly three inches above the knee-joint. Another bullet entered the inner aspect of the upper third of the same thigh and emerged on the inner and posterior aspect. A third ball entered the inner and posterior aspect of the right thigh, in the upper part of the middle third, fractured the femur and was cut out on the external aspect of the thigh on a level with the point of entrance. He also lost the distal phalanx of the first toe and the tips of the second and third toes of right foot from gangrene.

On the anterior aspect and sides of the scrotum are seen a large number of tumors of different sizes—some as large as

a big marrow-fat pea, others not larger than a mustard seed. They are most numerous and have attained the largest size near the junction of the scrotum with the penis, where they are seen in groups or clusters, and a number are hid among the hair growing abundantly in this region.

The skin covering these tumors is of a white or pale pinkish hue, and here and there delicate vessels can be seen traversing them in various directions. No trace of the orifice of a duct can be seen in any of them. Some of the tumors are pedunculated, others are sessile, and a large proportion merely present a slight elevation above the surface, the main part of the tumor being lodged in the thickness of the skin, and most of them are freely movable. They are divided by the median raphe so that sixty are on one side and forty-five on the other. Having removed one of the largest pedunculated tumors with a



pair of scissors, my friend and colleague, Professor McMurtry kindly made a microscopical examination of it and found the connective tissue of the glandular wall greatly hypertrophied, and the interior divided into lobules by septa of hypertrophied connective tissue. The contents were composed of a whitish, cheesy mass of unpleasant odor. Under the microscope they were seen to consist of large quantities of epithelial cells, fat and granular debris.

The points of interest in this case are: First, The great number of the tumors; Secondly, Their concentration within such a small space; Third, Their location upon the scrotum, which is a rather unusual site for molluscum sebaceum, being more frequently found upon the face and back; Fourth, The entire absence of similar formations and of any trace of sebaceous disturbance upon other parts of the body; Fifth. The age of the patient, for molluscum sebaceum, is, as a rule, a disease of infancy and childhood.

The accompanying wood-cut is about half the natural size. It does not give an accurate idea of the number of the tumors, for some of them are seated on the sides and others lie embedded among the hairs on the upper part of the scrotum.

Poisoning by Tinned Meats.—According to the *British Medical Journal*, a whole family at Northampton, consisting of five persons, have recently had a narrow escape from poisoning. After partaking of tongue from a hermetically-sealed tin, they all suffered from symptoms of irritant poisoning due to verdigris caused by imperfect sealing.—*Canada Med. Record*, April, 1882.

Omphalitis and its Complications.—Anna Lukens, M. D., Resident Physician to the Country Branch of the Nursery and Child's Hospital, Staten Island, treats of omphalitis of the new-born, in a paper published in the June number of the *New York Medical Journal and Obstetrical Review*. After giving an illustrative case, she remarks that the disease is of rare occurrence, but that it is said to occur even during foetal life, by the movements of the child causing traction upon an unusually short cord, or one that is wound around the body of the foetus. As described by Hennig, there are four varieties: 1. A mild form, in which the navel is prominent, the surrounding skin is reddened, the abdomen is distended, and, when the abdominal walls are thin, the vein can be felt as a cord extending from the liver to the umbilicus. 2. In the second or severe form, the navel is infiltrated and surrounded by a reddish-blue circle. Erysipelas frequently occurs and extends over the abdomen and the lower extremities. There is greater distension of the abdomen, even when peritonitis does not occur, than in the mild form. The urine is sometimes bloody or icteric. The stools are greenish or bloody. Movements of the inflamed navel are painful, and may cause convulsions or trismus. Recovery is rare in the severe cases, but may occur after the disease has continued two or three weeks. 3. The third variety is the croupous or diphtheritic. The peritonæum behind it is usually involved in the inflammation, and frequently the contiguous coil of intestine. 4. The fourth variety consists of an inflammation of the tissues surrounding the umbilical vessels within the abdominal cavity, and often accompanies puerperal disease. It is usually limited to the vicinity of the navel, but may extend along the course of the umbilical vein to the capsule of the Glisson. Early in the disease the umbilical

vessels are not affected, but they subsequently participate in the inflammation, and necrosis may occur from compression by the shrinking exudation. The peritonæum is at first only locally injected; afterward a yellowish infiltration separates it from the posterior wall of the umbilical fossa. Omphalitis may occur primarily, or secondarily to other diseases. It is attributed sometimes to anomalies in the closure of the navel, to rough handling, to uncleanness, to impure air, or to puerperal infection. Peritonitis and thrombosis of the umbilical vessels, with subsequent phlebitis and arteritis, are frequent complications. Umbilical hæmorrhage, icterus and pyæmia may also occur. Umbilical phlebitis may be produced by purulent matter entering the vessels from the fossa of the umbilicus, also by traction on the cord or tight bandages, or it may be secondary to omphalitis when non-involution of the umbilical vein exists. Thrombosis sometimes has an intra-uterine origin. Inflammation of the umbilicus, and especially of the outer walls of the umbilical vessels, is an important factor in causing non-involution. Besides other causes, thrombosis may also be due to defective nutrition of the vascular walls themselves, arising from a general septic poisoning, causing pyæmia or septicæmia. Whereas, on the one hand, thrombosis may occur from septic absorption, so, on the other, there may be general septic poisoning after involution of the vessels, when no thrombosis can occur. The infection may be limited by thrombosis *in situ* of the umbilical vein, just as the uterine lymphatic glands may sometimes limit the diffusion of poison in puerperal infection. The principal danger in thrombosis of the umbilical vessels is the softening and breaking up of the coagulum, with the formation of distant emboli. As the umbilical vein is, of all the blood-vessels peculiar to foetal life, the first to undergo involution, and is even at birth sometimes found considerably contracted, softened clots can rarely be admitted to the venous blood through the ductus venosus. Even an embolus in the liver is an exceptional occurrence. A coagulum at the entrance of the umbilical vein into the portal vein has been frequently observed, but is believed to be a local thrombosis and not an embolus. Thrombosis sometimes, though rarely, extends from the umbilical vein into branches of the portal vein. In regard to the pathological anatomy of umbilical phlebitis, the vein frequently presents a hard, cord-like feeling, the walls being thickened and often unevenly dilated. The contents may consist of simple disintegrated coagula or of uniform laudable pus. Sometimes the pus

column is separated by cheesy masses. Occasionally a pseudo-membrane is found lining the vein. The intima and middle coat finally dissolve into a mass of white blood-corpuscles. The liver is sometimes, though rarely, affected. Bednar once found, in umbilical phlebitis, the hepatic vein inflamed, and nearly all its branches filled with pus, which, on section of the liver, flowed out in great quantities. Emboli in the hepatic branches of the portal vein have not been clearly demonstrated. When inflammation of the connective tissue around the umbilical vein extends to the capsule of Glisson, the latter becomes swollen and infiltrated. The inflammation may extend to the hepatic parenchyma, and by compression of the bile ducts, produce mechanical icterus, which assumes, however, the malignant form. The symptoms of phlebitis are a cyanotic or icteric hue of the surface. Pemphigus vesicles and hæmorrhagic abscesses are frequent. Gangrene, especially over the sacrum and of the navel, may occur. The purulent contents of the vein can sometimes be pressed out through the umbilical fossa. The umbilicus becomes prominent and indurated. The cord may have fallen or be still adherent. The inflamed vein can sometimes be felt through the abdominal wall. Next to peritonitis, meningitis is the most frequent complication. Peritonitis may be circumscribed or general. The peritoneal fold surrounding the umbilical vein is often the starting point of the inflammation. Phlebitis is often only recognized after the appearance of purulent infection. It occurs between the first and twenty-eighth days, most frequently on the seventh. The fatal termination may be either from general septic poisoning, from peritonitis, from embolic infarction and metastatic abscesses, or from thrombosis in important vascular territories. Inflammation of the umbilical arteries may be confined to the seat of the coagulum, the remaining portion of the vessel being contracted or even closed. The coats of the vessels become swollen and gradually disintegrate, and finally perforation occurs. The adventitia is the seat of the principal changes, which readily extend to the surrounding tissue. Arteritis may occur after the umbilicus is almost or entirely healed, and the latter may afterward begin to protrude, inflame and suppurate. Pus can sometimes be pressed out by making pressure upward from the bladder. At times there is retention of urine, with painful micturition and sensitiveness in the region of the bladder. Icterus and peritonitis may occur, but belong more particularly to phlebitis. The contrast between arteritis and phlebitis is

striking. Arteritis is rarely accompanied by fever, icterus or pyæmia, and is almost always cured. Phlebitis has all the above-mentioned complications, and is almost always fatal. Arteritis is rarely a cause of general infection, but pyæmia may occur by purulent matter from the arteries being taken up from the umbilical fossa by the vein. This occurs more easily when the navel has been closed or healed over. Or infectious material could pass, in the opposite direction, into the pelvic blood-vessels, and from these into the general circulation. The neighboring lymph vessels can also take up molecular detritus and carry it into the circulation. Thrombosis of the ductus Botalli has been observed in arteritis, but oftener in phlebitis.

Book Notices, &c.

Electricity in Surgery. By JOHN BUTLER, M. D. Boericke & Tafel. New York and Philadelphia. 1882. 12mo. Pp. 111. (For sale by Messrs. West, Johnston & Co., Richmond.)

This little work is an excellent monograph. While the author states that it is based almost entirely on his personal experience, it yet shows that he must have been a constant reader of medical and scientific publications so as to have enabled his observations to keep so closely "up to the times." The book presumes a knowledge of the rudiments of electrophysics on the part of the reader; hence the matters purely rudimentary are not discussed. Only positive statements as to matters of fact are made. It treats of most of the surgical affections requiring electrolysis, electro-massage—electrical treatment, in short; and tersely explains when, where and how to apply the agent. The volume is well illustrated as to the instruments required and the manner of using the same. It should be in the hands of every surgeon.

Chronic Bronchitis—Its Forms and Treatment. By J. MILNER FOTHERGILL, M. D., Senior Assistant Physician City of London Hospital for Diseases of the Chest, etc. With Numerous Illustrations. New York: G. P. Putnam's Sons. 1882. 8vo. Pp. 160. Cloth. Price, \$1.50. (For sale by Messrs. West, Johnston & Co., Richmond.)

This distinguished author, in the book before us for notice, manifests the same characteristic desire to be *practical* that has heretofore made him a favorite with practitioners gene-

rally. His subject is one of peculiar interest to most physicians, since "chronic bronchitis," in one form or another, is the disease of gravity we are most frequently called upon to treat. The importance of the early recognition of the disease, and of prompt treatment as soon as recognized, are forcibly brought out. Many a case of confirmed consumption might be averted by a strict observance of the advice Dr. Fothergill herein gives. It is a very valuable book, and is handsomely issued.

Manual of Organic Materia Medica. By JOHN M. MAISCH, Phar. D., Professor of Materia Medica and Botany in Philadelphia College of Pharmacy, etc. With many illustrations on wood. Philadelphia. Henry C. Lea's Son & Co. 1882. 12mo. Pp. 459. (For sale by Messrs. West, Johnston & Co., Richmond.)

This book is an excellent guide to materia medica of the "vegetable and animal kingdoms," and is especially useful to students, druggists, pharmacists, country doctors who have oftentimes to select their own drugs, to professors in colleges and to scientists generally. It is not a complete work, for we notice omission of reference to many drugs that are in constant use; but what is said is thoroughly descriptive and accurate.

Treatise on the Science and Practice of Medicine. By ALONZO B. PALMER, M. D., LL. D., Professor of Pathology and Practice of Medicine and Clinical Medicine, University of Michigan, etc. New York. G. P. Putnam's Sons. 1882. 8vo. Pp. 904. Cloth. Price, \$5. (For sale by Messrs. West, Johnston & Co., Richmond.)

Another title to this book, as given on the title-page, is "Pathology and Therapeutics of Internal Diseases." It is in reality a treatise on the "practice of medicine," as the term is ordinarily understood; and is, without doubt, a very clever one. It discusses briefly and only incidentally the views of other authors; for Dr. Palmer's chief object seems to have been to prepare a book specially suited to the demands of American physicians. The work gives a resumé of the experience and observation of the author; and in so doing, what he has here recorded quite well reflects the opinion of American doctors of the present day in regard to the science and practice of medicine. We wish we could spare the space to refer somewhat in detail to some of the special chapters; but we must content ourselves with simply the statement of our opinion, namely: We do not think

practitioners of medicine in this country could benefit themselves more than by adding Prof. Palmer's *Treatise* to their library. The author does not hesitate to record facts—however they may affect theory. For instance, he recognizes the real utility of mercury in many conditions or affections—in accordance with general experience—however popular it may have become of late years to condemn its use from false theoretical standpoints. He even speaks suggestively of the value of cundurango in some cancerous conditions, because he has had "one remarkable case" stated to him of a lady of distinction who, according to the testimony of "three eminent practitioners," had a cancerous disease of the liver. Cundurango "was freely used, and in a few weeks the tumor disappeared." The author is entirely right in letting the *facts* be known.

Illustrations of Dissections. By GEORGE VINER ELLIS, Professor of Anatomy in University College, London, and G. H. FORD, Esq. Vol. I. Second Edition. New York, Wm. Wood & Co. 1882. 8vo. Pp. 233. (From publishers.)

This is an excellent number of "Wood's Library of Standard Medical Authors." Besides ample text-notes, it contains a series of original colored plates representing the dissection of the human body—the plates reduced on a uniform scale as compared with the exact measurements of the cadaver. The text is fully descriptive, and the plates well illustrate—both as to the lines and colorings—the different tissues or parts described in the text. This first volume of the series comprises a study of the upper limbs and of the head and neck. We would do our friends in practice an injury not to call their special attention to this work, which, if the subsequent volumes are the equal of the one now before us, will prove of as great value as any of the current works on anatomy. The price, per number of the series, is only \$1.50—even if bought as a separate book.

Nervous Diseases: Their Description and Treatment. By ALLAN McLANE HAMILTON, M. D., one of the Attending Physicians at the Hospital for Epileptics and Paralytics, Blackwell's Island, etc. Second Edition. Revised and Enlarged. With 72 Illustrations. Philadelphia. Henry C. Lea's Son & Co. 1881. 8vo. Pp. 598. (For sale by Messrs. West, Johnston & Co., Richmond.)

We were very favorably impressed with the first edition of this book, issued in 1878. But this second edition elimi-

nates most, if not all, of the errors contained in the former, and it is so much more complete as to the number of diseases studied and, withal, it comes so nearly down to the present day that we do not well see how the student practitioner can afford to be without this book. It is, in the highest sense, what the author claims for it—"a manual for students and practitioners."

PAMPHLETS, REPRINTS, ETC., RECEIVED, for which we have no room for further notice; but most of which can be obtained by enclosing a letter stamp for each pamphlet to the respective authors named.

Electricity in Medicine and Surgery, with Cases to Illustrate.

By JOHN J. CALDWELL, M. D., Baltimore, Md. 8vo. Pp. 32. Price, 25 cents. (This author, who limits his practice to diseases of the nervous system, herein records many important facts, and gives numerous illustrative cases.)

Anæsthesia and Non-Anæsthesia in the Extraction of Cataract.

By HASKET DERBY, M. D., Boston, Mass. 8vo. Pp. 32. (This surgeon to the Massachusetts Charitable Ear and Eye Infirmary, etc., also gives in this pamphlet some practical suggestions regarding the extraction of cataract, and comparative statistics of 200 cases.)

Editorial.

Richmond City Hospital.—During a recent *called* session of the City Council of Richmond, according to the proceedings as given in the *Daily Dispatch*, one of the Councilmen moved that the subject for special consideration—the ordinance for the appropriations for the fiscal year beginning May, 1882—be temporarily postponed in order to allow "Dr. J. B. McCaw to address the Council in regard to a city hospital," which motion was carried. Dr. McCaw then spoke of the necessity for such an institution for the working people who can take care of themselves when well, but who need assistance when sick. No city as large as Richmond is without a city hospital. He proposed, in behalf of the Faculty of the Medical College of Virginia, that the city take charge of the College Infirmary, which, he said, would accommodate 100 patients. This hospital could be put under the control of the Committee on Relief of the Poor. He believed \$5,000 would be sufficient to sustain the hospital from October 1st, 1882, to May 1st, 1883. The establishment of the hospital would help the College. The present rate of mortality in

the city was due to lack of proper attention to the sick among the laboring classes. In reply to questions, he stated that arrangements could be made for an eye and ear department. Colored patients would receive the same attention as white patients.

Dr. J. S. D. Cullen, in response to a like invitation to express his views relative to the hospital, in brief, endorsed what Dr. McCaw had stated.

The College Infirmary, referred to in the above remarks, is the building now used as the "Retreat for the Sick." The benefits of this institution to the State at large, under its present management, we partially pointed out in our April issue.

Were the differences of opinion entertained by some of the doctors of this city relative to this matter purely of local interest, we would not burden our pages with more than a reference to the subject. But the steps taken by the Faculty of the Medical College of Virginia to displace the present efficient management of the "Retreat," if pursued to their ultimate result, are unwise, and will prove injurious to the people and profession of the State, to the citizens of Richmond, and to the College itself. We are glad, however, that, as yet, no appropriation has been made by the City Council looking to the establishment of a *city hospital* in a building that *belongs to the State*.

As we have time and again asserted, we are warm advocates of the establishment of a reputable *city hospital*—distinct and separate from the hospital department of the Alms-house, the College Dispensary, etc. We will join, heart and hand, in any properly directed effort for the establishment of such an institution. As Dr. McCaw said, there is an urgent necessity for a city hospital. We know of no city as large as Richmond that is without one. It is simply the *special plan* proposed by the Faculty before the Council for the establishment of the city hospital that we oppose.

In the first place, the plan suggested, to change the "College Infirmary" into a *city hospital* cannot legally be effected, except by special vote of the Legislature. In the next place, this suggestion, were it practicable, ought not to be carried out, because the building is of more service to the State at large, *under its present management*, than if changed to a *city hospital*. In addition, it would do the College no special good to have the institution under its special charge; for if the Faculty seeks clinics from the proposed arrangement, there is no evidence that the Professors will be more ener-

getic in the future than they have been in the past. The Editor of this journal, during his nearly three years' connection with the "Retreat," as Acting Assistant Surgeon U. S. Marine Hospital Service, time and again offered the use of the patients in his ward for clinical lectures; but during the entire period of his connection with the "Retreat," he does not recall that more than three lectures or attempts at clinics have been made by members of the Faculty. The failure to have clinics, therefore, was no fault of the "Retreat," but was due to negligence on the part of the Faculty to avail themselves of the opportunities cheerfully granted. Another reason for our objection to the special plan is that the building is not suited to the purposes of a *general city hospital*, unless extensive repairs or additions are made at the expense of the city. Such expenses will not probably be incurred by the State; and of course the city will not vote anything materially in this direction.

We stated our belief to this effect in our April editorial. It so happens that at a subsequent meeting of the City Council to that now referred to, the "appropriation bill" was passed, allowing the usual annual sum to the Eye and Ear Infirmary, and to the other benevolent objects; but, fortunately, no appropriation was made for a "city hospital," *in accordance with the wish of the College Faculty*, as expressed by the two Professors who appeared before the called meeting of the Council. The result will almost inevitably be the closing up of the doors of the building now used for the "Retreat"—an institution which has proved of the greatest service to the State at large, and which would have continued to increase in the range of its benefactions had not the shortsightedness of the Faculty doomed the building, at least for a time, to remain unoccupied by patients and unused, except by parties who will probably not take enough interest in it to make needful repairs, or even to use paint and whitewash as may be required to preserve the wood-work and to make the building acceptable to the eye.

As we have formerly remarked, it was certainly premature in the Faculty to give an order to the Lady Managers to vacate the building until after it could be learned what the City Council would do. Very few, if any, beside a majority of the Faculty of the College, wish to locate a city hospital in what was known as the "College Infirmary." The error and imprudence of the too hasty action of the Faculty will, of necessity, react detrimentally to the interests of the College. We sincerely hope the Faculty will reconsider their

action; and if they do so dispassionately, and with an eye to the good of the College and to the State, in whose behalf they act, they will rescind the order they have sent to the Lady Managers of the "Retreat for the Sick."

Viewing this subject, even from a *policy* standpoint, it seems to have been forgotten by the Faculty that the present managers of the "Retreat" are a hundred or more of the most excellent and prominent ladies of this city—representing, we believe, every religious denomination of the State. They are the wives and daughters of our best citizens. They attend to their duties faithfully and well; and are prompted by the desire, common to cultivated ladies, simply to do what they can to help or comfort the sick. We have never heard, either directly or indirectly, of any attempt on their part to interfere in any professional work or suggestion on the part of the doctors who attend patients in the institution. On the contrary, these ladies have proven themselves to be willing workers in a good cause. Of course, these ladies neither expect nor receive any remuneration, except that reward, which is of greater value than money—the consciousness of an effort to do good. It was a bold stroke of impolicy for the Faculty to make an attack upon these ladies, who, it will be found, have a wider field of influence than all of the members of the Faculty put together—including Professors and Adjuncts. Surely "much learning" has made this Faculty mad.

It will not do to let either the Medical College of Virginia or the "Retreat for the Sick" go down. Whatever there may be wrong in the conduct of the College, let it be corrected, and whatever of worth it may possess, let that be commended. If any fault can justly be found with the management of the "Retreat"—which is still conducted in accordance with the original plan as directed by the Faculty—let it be brought to the attention of those in authority, and we are confident the ladies will act rightly.

It is quite well known that there exists a difference of opinion in the profession of Richmond as to the site and details of establishing a general city hospital. There are, of course, some who look upon the matter from a purely selfish standpoint; and, in order to secure their point, are willing to make the heaviest kind of sacrifices of the public good. There are others who have scarcely ever been in the wards of a well-arranged general city hospital who regard anything like a liberal contribution for the support of such an institution as a useless expenditure of money. There are, on the

other hand, those who, forgetful of the ability of the city to pay, are too extravagant in their estimates. But all agree that *there should be a general city hospital*.

It seems to us almost "childish weak" to attempt to argue as to the propriety—even, the *necessity* of a Richmond City Hospital. Health is not only a desideratum on the part of every one, but is a necessity for the promotion of the social and business relations of any community. Provisions to preserve health and to take care of the sick are, therefore, of the highest importance to every town or city. Especially for the laboring classes—the bone and sinew of every community—should ample hospital provisions be made. We have ourselves known of instances where expert workmen have come to this city to go into business, but who, accustomed to hospital advantages in the cities from which they came, and yet finding no suitable arrangements here, have gone elsewhere. In the present state of affairs, the workman has to leave his work for the purpose of being at home to nurse the sick member of his family who might suffer from negligence were he not there to run for the doctor, go for the medicine prescribed, etc. Health is as important to the best interests of a community as education; for without a sound mind in a healthy body, all the education one can possibly obtain would prove—unless in very rare instances—of no practical advantage. Magnificent public school buildings are erected at great cost; a large corps of teachers and superintendents and other paid officials are appointed at a large total annual expense; streets are graded and paved for the convenience of citizens; a \$300,000 City Hall is about to be erected to satisfy the pride of the people. All of these expenses are proper and necessary, and are cheerfully incurred in order to gratify demands of duty, or taste or other sense of pleasure. But scarcely \$5,000 a year are now appropriated for that which is, in reality, far more needful—the taking care of sick who are unable to take care of themselves.

There are some who, in favoring the establishment of a general city hospital in the College Infirmary, argue that it is an "entering wedge" which will raise up mightier results. The wedge is a great power, when it itself is properly made of the proper material, and when properly driven. But the wedge here proposed to be inserted, we maintain, is not made of the right material, nor rightly shaped, nor rightly driven. To attempt to drive the wedge now inserted will simply retard the establishment of a city hospital, because it

will take time to extract the broken off pieces so as to find place to drive in a perfect one.

It was a misfortune to the success of the grand undertaking that, with one member of the Faculty already belonging to the Board of Aldermen, *only* two Professors of the Medical College of Virginia were called upon to express their views in regard to the proposed city hospital. Certainly there are some doctors in the city of equal prominence and of as much general influence as those who addressed the called Council meeting, who have different views as to the *plan* of establishing a city hospital.

If the majority of the Faculty of the College have viewed this matter from a selfish standpoint, surely they have become reckless as to the consequences. "Striving to better, oft we mar what's good."

The Tennessee State Medical Society held its Forty-Ninth Annual Session in Memphis on May 9th and 10th. There were over forty members present. The address of the President, Dr. G. B. Thornton, of Memphis, was well received. He specially addressed himself to the discussion of the importance of Inland Quarantine, and of the appointment of health officers for every county of the State. The Society seconded these suggestions, and by resolution declared that the health officer should have a regular medical education. The *Southern Practitioner* (June) contains the full text of Dr. Thornton's address. Dr. W. F. Glenn, of Nashville, was elected President for ensuing year.

Chicago Medical Society.—At the annual meeting of this Society, held April 10th, Dr. Emma Gaston received 15 votes of 33 cast for the office of Vice-President on the first ballot. Dr. Emma Gaston declined "with thanks," and Dr. Graham, who had received only seven votes on the first ballot, was elected Vice-President. Wherever there is worth in the profession, whether male or female, let it be recognized.

Deafness in School Children.—Dr. Sexton, at the request of the Commissioner of Education of New York City, made investigations in regard to the deafness among the school children. The *Medical Record* says, in the examination of 570 pupils in the parochial and public schools, he found 76 were suffering from deafness in one or both ears, and in only one case had deafness been suspected previously by teacher or pupil.

Notice to Graduates of Bellevue Hospital Medical College.—A second decennial revision of the Catalogue of Alumni of this College is being prepared for publication, and we are requested to ask that all graduates send their present address at once, on a postal card, to the Historian of the Alumni Association, Bellevue Hospital Medical College, New York, N. Y.

Brock Memorial Prize.—Dr. James E. Reeves, late President of the West Virginia Medical Society, will offer annually a prize to the author of the best original paper read before the State Medical Society. He names the prize in honor of the late Dr. H. W. Brock, an eminent physician of West Virginia. A committee to award the prize was appointed by the retiring President.

The Southern Dental Association will convene at Baltimore in August next. *American Journal of Dental Sciences* (May) says: "Full arrangements are being made to secure a large corps of clinical operators, from the ranks of the most gifted and experienced in the profession, and covering not only operative but surgical and mechanical dentistry. It is proposed to make this *the distinguishing feature* of the meeting.

Venereal Diseases.—Dr. A. H. Gihon, Medical Director U. S. Navy, in a recent address before the Medico-Legal Society, states that "One man in every ten in the Navy of the United States, since 1873, has been disabled by some form of venereal disease, and one-tenth of the whole appropriation for the care of the sick has been consumed in the treatment of this class of preventable maladies; nor is the percentage less in our Army, than in the naval and military services of other nations." He further states that during the last year, that every sixth or seventh man of the U. S. Navy, and every tenth of the Army (and among the negro soldiers every seventh), is afflicted with some form of venereal disease. Dr. Gihon is a strong advocate for legislative action for the prevention of the spread of venereal diseases. Hong Kong is ahead of American cities in suppressing this hydra.

Training School of Nurses.—We are glad to learn from the *Med. and Surg. Journal* (New Orleans) that a citizen of Boston, Mass., has made a liberal contribution to sustain this school for the training of nurses in the Crescent city. The *Journal* hopes that help may also come from people nearer at hand.

Health of Cities.—The *Sanitarian* is authority for the following: The six healthiest cities in the United States—Utica, Springfield, Lawrence, Omaha, Providence and Cambridge.

The six unhealthiest—Memphis, Charleston, St. Paul, Buffalo, Pittsburgh and Mobile.

The six unhealthiest in the world—Memphis, Alexandria, Charleston, St. Paul, Warsaw and Havana.

Medical Students.—Of the 4,823 students attending the University of Vienna during the past winter, 1,412 took the medical course. The law students were 800 more numerous.

Dr. Toner's Library, comprising from 20,000 to 25,000 books, pamphlets, manuscripts, etc., has been presented to the United States. It will be preserved in the Library of Congress. The *Maryland Journal* regrets that this valuable treasure was not secured for Baltimore, as it might have been had proper diligence and liberality been exercised. It is a more serious regret to us that Richmond physicians and the public did not accept the offer of Dr. Toner, when his princely gift was tendered to Richmond. It was well for Dr. Toner to require of the profession in Richmond, or of Baltimore, to erect a fire proof building for the safe keeping of a library so valuable, and one possibly that cannot be duplicated.

Syphilis.—Dr. F. N. Otis, New York, reports eight cases of syphilis occurring in the fingers of physicians.—*Detroit Clinic*, May 24.

Dr. J. J. Woodward, Surgeon U.S. Army, President of the American Medical Association, is reported to be seriously ill in Europe. The *Cincinnati Lancet and Clinic* (May 27) says, that the reports received from him by his friends are not encouraging. He is at Nice.

Female Doctors.—We have no opposition to suggest to the medical education of women; certainly as nurses they cannot be excelled. But when they desire to become doctors, and as such to practice, we would calmly suggest that the most careful consideration should be taken. The *Louisville Medical News* (May 20) well says, that "no one woman has done the cause greater service than Dr. Mary Putnam Jacobi; and yet, she has given great discouragement to her medical sisters by her clear and forcible statement of the character and

drawbacks of the work." Dr. Jacobi, in her recent article for the *North American Review*, says that the profession of medicine must be chosen from a strong and genuine taste, and must be adopted not from an economic pressnre, but as a life work. The woman must renounce marriage for the sake of medicine, "or else there must be such an adjustment of domestic claims as shall render them and the practice of medicine by married women mutually compatible." And surely this is the great difficulty. *Hoc est opus.*

The Prevention and Restriction of Small-pox, is the title of a reprint of the Michigan State Board of Health. The *Michigan Med. News* says: "It is a singularly apt condensation of the literature on this subject, and contains, in addition, many important suggestions." Copies will be supplied on application to Dr. H. B. Baker, Lansing Michigan. While small-pox, as an epidemic, has disappeared in the country, it would be well for the practitioner to have at hand such a treatise as is above referred to. It may be obtained for the asking.

The American College Medical Association held its annual session at Cincinnati May 16. Only eleven colleges were represented. The *Michigan Med. News* (May 25) substantially says, that it was decided that the time had not come for the medical colleges to exact of students an attendance on three courses of lectures (of six months each). Two years ago such a plan was adopted. The advanced idea was abandoned. We believe that the day has not yet come when the several colleges can or will act upon a common platform. There are too many colleges and too little concern to advance the standard for graduation. Short time and little pay out-balance higher considerations with the large majority of medical students.

The Louisiana State Pharmaceutical Association was organized in New Orleans on April 24. The *N. O. Med. and Surg. Journal* (June) gives a full report of the proceedings. We make our summary from this excellent journal. Dr. J. T. Thibodaux, of Lafourche Parish, was made permanent President. Mrs. E. Rudolf, the only lady druggist in the State, was enrolled as a member by the unanimous vote of the Society. It was decided that a *druggist* (one who merely handles and sells drugs) was not eligible to membership, unless he possessed the qualifications of a *pharmacist* also.

Medical Society of North Carolina.—We give a large space to report the interesting proceedings of the twenty-ninth annual meeting of this Society. They will be found interesting and valuable.

The Rush Medical College closed its annual term of four weeks of the Practitioners' Course on May 1. About 100 physicians, from all parts of the country, were present.

Hydrophobia.—If Dr. Proctor, of Union City, (*Med. Brief*, June) has a remedy for hydrophobia, Dr. McGuire, of Millville, Tenn., and many others of the profession would pronounce him a "second Jenner" if he would make it public. We recently read a clever novel, "Beggar My Neighbor," and in it a sort of off character—an apothecary—professed to have made the same discovery. The specific, however, killed sound dogs and men, when applied as prescribed or otherwise. Let Dr. Proctor make a few experiments among the heathen population.

The Indiana State Medical Society held its thirty-second annual session on May 9–11. Attendance large. The membership is 1,162. The New York Code was condemned. Dr. W. H. Bell was elected President for ensuing year.

A box of chemicals marked "Soothing Syrup" took fire from spontaneous combustion on board the steamer Cochran, near Cedar Keys, Florida, last week, and but for a timely discovery a serious disaster might have resulted.—*Oil and Drug News*, May 30.

[Not only from "spontaneous combustion" on shipboard, but otherwise and more frequently do these soothing mixtures bring disaster.]

Cinchona.—The failure of the late Commissioner of Agriculture, Le Duc, to get satisfactory results from his efforts to naturalize cinchona in the United States, will not prevent further efforts. The present Commissioner, Mr. Loring, as will be seen from his circular of May 12, will push investigations, and it is thought that he will be able to report success.

M. Pasteur is now nearly sixty years of age; he has long been a sufferer from paralysis of one of the hemispheres of the brain.

Congress and Library of Surgeon-General's Office.—"We regret to learn that the Senate Committee have cut down the usual appropriation of \$10,000 for the Library of the Surgeon-General's office and the Army Medical Museum to \$5,000. They who know how valuable these two objects are to the medical profession of the country * * * will most deeply regret a parsimony which saves a paltry \$5,000 at this point. * * * No one who has experienced the open-handed liberality of the Library but will wish to aid it. To these all over the country, we say, they must act, and act *quickly*. Let them write *to-day* to these Senators, whether they know them or not, and simply urge the restoration of the usual appropriation. We most earnestly hope there will be no question raised as to the appropriation for continuing the publication of the *Index Catalogue*. It would be not a national but an international calamity.—*Med. News*, June 10.

[We heartily endorse the recommendation of the *News*, and hope that the physicians throughout the country will at *once* write their Senators, and urge upon them the importance of continuing the old appropriation. To cut down the appropriation would be a calamity to the public at large. A proper appeal to the Senate will not prove unavailing.—Ed.]

Saddle Bags.—A country practitioner must combine many excellencies to be successful. In a city the doctor can rely upon the pharmacist, to whom his prescription goes, for the faithful preparation of his recipe, but in the country, especially in the South and Southwest, there are few druggists prepared to put up a prescription, other than the most simple. The *doctor* must, of necessity, be doctor and druggist. It is well that he should be equipped for this double duty. A good set of saddle bags is a necessity, and, according to the highest authority, none better has been made than Eliott's patent, by A. A. Mellier, of St. Louis.

Caution.—Is there any danger of going too far with Koch and the bacillus leprae? Of late years there has been too strong a tendency to run off with a new idea, or new idea "so called." Do not let us jump right into the lap of a new or novel creed, solely because it is novel. At the same time, we cannot reject a good doctrine simply because Galen or John Hunter have not applauded it.

Indications for the Use of the Bath.—"I think a bath daily would be beneficial in your case," said a physician to a pa-

tient. "Well, I don't know, doctor," he feebly replied. "I took a bath once, a year or two ago; I felt better for awhile, but it wasn't long before I was just as bad as ever, and I have been growing worse ever since." This is almost equal to the French medical writer, who objected to bathing, because it removed the natural secretions of the skin.

The American Medical Association Proceedings at St. Paul, Minn., June 6-9, will be fully reported in our June number. We are sorry that we find out at too late a day that it will be impossible for us to attend the session, although we have completed arrangements for full reports to be made.

Dr. James F. Pendleton, of Marion county, has been appointed by the new Directors to the post of Second Assistant Superintendent of the Western Lunatic Asylum at Staunton.

Dr. James P. Gray, Superintendent of the Utica, N. Y., Insane Asylum, who was severely wounded some weeks ago by a lunatic, is in a critical condition. For awhile it was believed that he would recover, but at this time there seems to be little hope of his restoration.

Atlanta Medical Register.—Dr. John T. Johnson retires from the editorial management of the *Atlanta Medical Record*, and is succeeded by Dr. James B. Baird. The outgoing and the incoming are men and physicians of highest merit. Under Dr. Baird, the *Register* will not fall short of a high standard.

Pharmacopœia.—The contract for publishing the new edition of the *Pharmacopœia* has been awarded, says the *Atlanta Register*, to Messrs. Wood & Co., of New York.

Listerine.—Heretofore we have had occasion to give hearty endorsement of Listerine. We are pleased to note the fact that the preparation is receiving the approval of the most eminent surgeons. Dr. A. F. Erich, Professor of Diseases of Women, etc., in the College of Physicians and Surgeons, Baltimore, highly recommends it as a vaginal injection, and Dr. Christopher Thompson, of the University of Maryland, says that he has had "great satisfaction with the use of Listerine in my surgical practice." The preparation is daily gaining ground.

A Prominent Physician of this city who was taking a mixture of cascara sagrada and strychnia for constipation, discovered that the alkaloid was acting as an aphrodisiac; not being in need of such a remedy, he wrote a note to a neighboring druggist, in which he stated the case and requested that the prescription be refilled, minus the strychnia. His messenger returned with the medicine and the following laconic reply: "Here's your cascara; for G-d's sake send me the strychnia!"—*Miss. Valley Med. Monthly*, June, 1881.

PERSONALS.

Assistant Surgeons U. S. A.—**Dr. W. O. Owen, Jr.**, of Lynchburg, Va., has recently received an appointment as Assistant Surgeon in the U. S. Army. He was not encumbered with "disabilities" we presume.

Dr. Benjamin Mundy, also of Virginia, has received a like appointment.

Obituary Record.

Dr. Greenville Dowell died at Galveston on March —, 1882. Dr. Dowell was born in Virginia in 1822. He received his degree as M. D. from Jefferson Medical College. After short residences in Tennessee and Mississippi, he made Texas his home in 1865, settling in Galveston, where he gained great distinction by his practice and his editorial management for some years prior to 1872 of the *Galveston Medical Journal*. He was surgeon in the Confederate Army from 1863 to the close of the war. Dr. Dowell contributed many valuable papers to the *Monthly*. Through his work on *Hernia* he became best known.

Prof. John W. Draper, M. D., LL. D., was born in England, May 5th, 1811, and died at his home near New York city on January 4th, 1882. He had nearly reached his seventy-first year. He came to America in his early manhood, and graduated with such distinction at the University of Pennsylvania, in 1836, as to give evidence of his future greatness. Soon after graduating he moved to Mecklenburg county, Va.; soon thereafter he was elected Professor of Chemistry at Hampden Sidney College, Va. In 1839 he accepted the Chair of Chemistry, and afterwards became Professor of

Physiology in the University of New York, with which institution he was connected, we believe, until his death. No chemist or scientist of America was better known than Prof. Draper, and as a learned writer on subjects, his works have found readers throughout the civilized world. His works on Chemistry and Natural Philosophy are as familiar as household words in the schools and colleges; his early and late investigations into the chemical action of light made him an authority everywhere recognized. To him belongs the distinction of taking (in 1839) the first picture of a human face by the photographic process, then known as daguerreotype. In 1847 appeared his monograph "On the Production of Light by Heat;" it was, perhaps, the initial contribution on the subject of spectrum analysis; yet thirteen years later, M. Kirchhoff generally secured the credit for the discovery through a contribution made by him to the *Philosophical Magazine* (England) in July, 1860. On the establishment of the Medical Department of the University of New York, in 1841, he became Professor of Chemistry. Chemico-physiological investigations then closely engaged his attention. In 1856 his treatise "On Human Physiology—Statistical and Dinamical" appeared. Among the writings of this laborious worker, by which he is known to the general reader, his "History of the Civil War"—a work as extensively read in Europe as in America.

Prof. Draper earnestly espoused the Federal cause during the civil war, but this fact did not lessen the friendships he had made while in Virginia.

Prof. Draper continued his scientific investigations until a short while before his death. He loved science for its sake. Among the last theories he announced was the presence of oxygen as an element in the constitution of the sun. A contemporary is our author for stating that in 1880 or 1881 he "succeeded in taking photographs of at least two of the comets that were then in appearance." Certainly in the death of this venerable scientist, the world has lost one of its greatest patrons, and the loss to Society and Letters has not been less.

Dr. H. D. Fowle, perhaps the oldest druggist of Boston, died suddenly, it is supposed, of heart disease, on May 23.

Dr. James Morrison, of Quincy, Mass., a graduate of the University of Maryland, 1846, died May 20, æt. 63.—*Maryland Med. Journal*, June 1.

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Proceedings of Societies.

AMERICAN MEDICAL ASSOCIATION.*

Session Held in St. Paul, Minn., June 6--9, 1882.

GENERAL SESSION.

FIRST DAY—TUESDAY, *June 6th*, 1882.—The Thirty-third annual meeting of the American Medical Association convened at the Opera House at 11 A. M. Dr. A. J. Stone, of St. Paul, conducted the officers to the stations; and after prayer by Right Reverend John Ireland, Governor L. F. Hubbard made a happy welcoming address.

In the absence of the President, Dr. J. J. Woodward, who was abroad for his health, Dr. P. O. Hooper, of Little Rock, Ark.—the First Vice-President—took the chair.

Upon invitation for the ex-Presidents and Vice-Presidents to occupy positions on the platform, Drs. Lewis A. Sayre, of New York; N. S. Davis, of Chicago; J. M. Toner, of Washington, and Beverly Cole, of San Francisco, were shown seats.

Dr. Stone stated that a number of protests had been received against the admission of delegates from the New

* In compiling this report, we must say that we have never before seen such energy, active interest and unstinted liberality displayed by *daily* papers in furnishing full reports of the proceedings of a medical organization as was done by the *Daily Pioneer Press* and the *Daily Globe* of St. Paul, to which papers we are mostly indebted for the matter here presented our readers. In *medical* journalism, a greater success was accomplished by the *Medical News*, of Philadelphia, published by Henry C. Lea's Son & Co., than was ever before done in this country. *Excellent* reports were furnished the *News* by telegraph.—ED.

York State Medical Society on account of the position recently taken by it regarding the Code of Ethics.

The Secretary of the Association, Dr. Wm. B. Atkinson, of Philadelphia, stated that the State Societies of Georgia, Pennsylvania, Arkansas, Kentucky, Tennessee, Missouri and others, besides a number of more local Societies had adopted resolutions condemnatory of the action of the New York Society.

Dr. Lewis A. Sayre, who had received a certificate as a delegate from the New York Society to the American Association, returned the certificate and declined to act as a delegate, as he could not see how the New York Society, which had passed a resolution ignoring the Code of Ethics, could expect their delegates to be received into the Association. Dr. S. D. Gross, of Philadelphia, in his note of regret at not being able to attend the session, says he regards the proceedings of the New York Society "as an outrage which every member of the profession should consider as a deep personal insult, and which the Association should rebuke in most stern and uncompromising terms."

These protests and some other matters of local interest were referred to the Judiciary Council.

Dr. Hooper then proceeded to deliver the Annual Address of the President. He regretted the inability of the President to be present and that the duty of preparing the address had fallen upon him. He alluded to the range of usefulness of the Association, and to the good effects it has accomplished. As to the American College Association, he thought its certain success only a question of time. He favored the establishment of a medical journal in lieu of the present annual volume of transactions. After referring to the importance of boards of health and how this Association had been instrumental in establishing many State Boards as well as the National Board of Health, he spoke of the present epidemic of small-pox in the United States. He suggested that, if possible, provision should be made by law for universal vaccination and revaccination. He thought the subject of establishing medical aid associations should be considered. The good results of the various benevolent aid societies show that a plan is feasible. He advised against change in the Code of Ethics. He reminded his hearers that only thirteen of the thirty former Presidents of the Association now survive; and, after an earnest appeal to the young men to emulate the good examples of those who have gone before, he concluded his address.

On motion of Mr. Wm. Brodie, of Detroit, thanks were voted Dr. Hooper, and his address was ordered to be published.

On motion of Dr. J. Solis Cohen, of Philadelphia, the letter from President Woodward, expressing his regrets at not being able to attend the session on account of impaired health was read, and a cablegram expressive of the sympathy and good wishes of the Association for Dr. Woodward was dispatched.

Dr. N. S. Davis, in the name of the Women's National Christian Temperance Union, presented the following preamble and resolution, which were referred to the Committee on Medical Jurisprudence :

Whereas, Alcoholic intemperance is a prolific cause of disease, and prevention through the education of the people is one of the most powerful antidotes,

Resolved, That we approve teaching the children and youth in the schools and educational institutions in this country, as facts of hygiene, the physiological dangers and evils resulting from the use of alcoholic beverages; and

Whereas, It is the acknowledged duty of the State to provide for such education of the people as is essential to good citizenship,

Resolved, That we recommend the State Legislatures to enact laws requiring the physiological dangers and evils resulting from the use of alcoholic beverages taught in all schools supported by public money or under State control.

An invitation from Atlantic City, N. J., for holding the next annual session of the Association was duly referred.

Adjourned until 10 A. M. to-morrow.

SECOND DAY—*June 7th.*—The Association was called to order at 10 A. M.—Dr. Hooper in the chair.

After prayer by Rev. D. R. Breed, Dr. Stone, of the Committee of Arrangements made announcements of numerous invitations to visit places of interest.

The Chair announced the Committee on Nominations.

Report of Committee on Journalizing the Transactions.—Dr. John H. Packard, of Philadelphia, chairman of the committee appointed last year on this subject, reported that the committee recommended the establishment of a weekly medical journal under the control of nine trustees, three to be elected each year and to serve for three years. The editor's salary to be \$6,000 per annum—he to pay the salary of the assistants; the journal to be entitled "*The Journal*

of the American Medical Association." The subscription price for non-members of the Association is to be six dollars per year. The committee propose that the Board of Trustees should send out circulars to every regular physician whose address could be obtained, and if within three months the answers should be sufficiently encouraging—say 2,000 subscribers pledged—the Board should then elect an editor and complete the arrangements for early publication.

The report was accepted and made the special order of business for Thursday morning.

Amendments to the Constitution.—All of the proposed amendments were laid on the table until after the report of the Committee on the Publication of the Association Journal could be acted on, except the one proposing to allow permanent members to vote. At present only delegates from societies can vote. The amendment was lost by an overwhelming majority.

Principles of Regular Practitioners.—Dr. Charles Denison, of Denver, Col., introduced the following resolution or motion, which was referred to the Judicial Council:

In order to correct a misconception which largely exists in the public mind, and to some extent prevail among members of the medical profession, as to the liberty of action authorized by this Association in the treatment of disease, we deem it proper to make a declaration of principles broadly applicable to the healing art as sanctioned and practised under our code, to-wit:

Rational medicine, being based upon experience and pathological researches, demands absolute freedom in the selection and methods of administration of articles of the *Materia Medica*; and there is nothing in the Code of Ethics of the American Medical Association prohibiting the use by its members of any known and honorable means of combating disease. Furthermore, as contributing to the alleviation of human suffering, we hail with pleasure and gratitude every discovery in etiological and therapeutical science by whomsoever made. We, therefore, reject as untrue and obnoxious the term "allopathists" as applied to the members of this Association by dogmatists and extremists without its fold. First. Because it tends to convey the erroneous impression that we are restricted in the choice of remedies and the method of using them, by other than the limits of rational science. Second. Because for any association of men claiming to practise the profession of medicine, to adopt a name based upon limited and conjectural theories of therapeutics,

for the purpose of designating a particular school of medicine, we have always held and still regard as unscientific in principle and dangerous in practice.

Address in Medicine.—Dr. J. Oesterlony, of Louisville, Ky., read his address on this subject. He began by stating that medical nomenclature is now almost perfect. The practice of medicine has undergone a complete revolution. In 1827, Bright's disease was not understood until he made the disease a special study, and his developments created a new era in medicine. There are few diseases more striking than inflammatory goitre, and yet until 1835, humanity had suffered from it without physicians being able to determine what it was and the method of treatment.

In referring to inflammation, he defined it as consisting of four distinct elements, to which in later years was added a fifth; but the whole theory was overthrown when the circulatory system was understood. It is now known that vascular disturbance does not, in itself, cause inflammation; but tissue disturbance is sufficient to do so, and, in most cases, is the exciting cause. He further stated that nervous diseases of all kinds are successfully treated. Pulmonary consumption is no longer the dread disease it was once considered, and its duration has been doubled since modern treatment has been applied to it.

The lancet, some one has said, is a little instrument of mighty mischief. But what the lancet was in former years the microscope is now to medical investigators, and its wonderful revelations in the infinitesimal world have kept pace with the revelations of the telescope in the starry world. Diseases have been analyzed and their causes made known. Leprosy has been shown by the microscope to depend on a vegetable parasite. The same instrument has shown that the exciting cause of typhoid fever is also a noxious parasite, and scarlatina and diphtheria fall in line under the same classification. Malarial diseases were long referred to an element so subtle as to elude detection; but the same mighty instrument has shown that these disorders are due to a peculiar parasite found only in malarial spots and nowhere else.

Dr. Oesterlony concluded his address by saying that all the important knowledge now in the hands of the profession and the important discoveries in medical science had been contributed by the regulars, and not by the irregulars.

A partial report was made by the Judicial Council through their chairman Dr. N. S. Davis. In regard to the Nebraska State Society, a careful examination of the matters involved

in the protest against the admission of said Society to representation in the American Medical Association, shows no proper cause for such protest at the present time.

In regard to the resolution concerning the use of certain remedies controlled by a patent copyright or trademark, referred to Judicial Council last year, the Council has decided that inasmuch as the resolution includes matters not referred to in the Code of Ethics, and said code contains all that is necessary for the guidance of the medical profession, therefore the resolution should not be adopted by the members of the Association.

In regard to the protest against receiving delegates from the New York State Medical Society, the Judicial Council decide as follows:

Having carefully examined the Code of Ethics adopted by the New York Medical Society at its annual meeting in February, 1882, the Council find in said code provisions essentially differing from and in conflict with the Code of Ethics of this Association, and therefore, in accordance with provision of rule 9 of the by-laws of this Association, decide unanimously that the said New York Society is not entitled to delegates in the American Medical Association.

This report was received with long continued applause.

Uterine Tumors.—Dr. H. O. Marcy, of Boston, read a paper on this subject, which was illustrated by views, thrown on a screen from a solar microscope, showing the peculiar formation of various tumors and the influence they had upon surrounding parts in the abdominal cavity. They were composed of sections of the uterus surrounding the tumors (which had been removed by Dr. Marcy) and prepared with great care by his assistant for the express purpose of microscopic investigation and practical illustration. It seemed to be the general opinion of those present that this new solar instrument was truly a remarkable improvement over the ordinary stereopticon method of illustration.

The inventor, Dr. L. D. McIntosh, of Chicago, explained fully the principles of this solar microscope. By its aid, physiology, pathology, histology can be studied with illustrations of genuine sections. The circulation of the blood can be mirrored forth with startling distinctness; images of living animaleculæ, minute insects and aquatic animals, with all their motions thoroughly portrayed, and in cases where they are transparent, the beating of the heart and movements of the internal organs are vividly shadowed forth upon the canvass in a degree of perfection almost beyond belief. This

instrument is manufactured by the McIntosh Galvanic and Faradic Battery Company of Chicago, and was invented by Dr. L. D. McIntosh, who is also the inventor of the galvanic and faradic battery that bears his name. It is a combined instrument, and can be used as an ordinary monocular, solar microscope and as a stereopticon. It is very simple in its arrangement, there being no complicated parts that are liable to get out of order. The stereopticon proper is similar in appearance to the ordinary stereopticon, sunlight being used instead of artificial light. When the stereopticon objective is removed, and the working part put in place of the stereopticon objective, the solar microscope is then ready for use. If it is wished to be converted into a monocular, the working part is taken off and placed on a stand provided for the purpose. It is indispensable for the full illustration of the natural sciences, such as anatomy, physiology, astronomy, geography, botany, zoology, and so forth. Its use as a means of instruction is of great value, as an object can be shown with equal facility to a large class or audience as to a single person. In the matter of economy, it is in advance of an ordinary stereopticon, as sunlight is cheaper than artificial light. It is exceedingly portable, and can be placed in position in a very short time. The ordinary power is that of 500 diameters, although, with higher objectives, it is capable of attaining a power of 1,500 diameters. Taken altogether, it is truly an invaluable invention, and its use will be of an extended nature.

Adjourned until 10 A. M. to-morrow.

THIRD DAY—May 8th.—Dr. Hooper in the chair; prayer by Rev. M. N. Gilbert. Communications were received from the Colorado State Medical Society, stating that it will report in favor of maintaining the Code of Ethics; also one from the Medical Association of Georgia endorsing the code as it is. These announcements were received with applause.

Dr. Stone, from the Committee of Arrangements, made numerous announcements looking to the social pleasures of those in attendance.

Dr. Foster Pratt, from the Committee on Nominations, read out the nominations of officers for the ensuing year; but as some of those nominated were not present at the session, according to a formerly adopted resolution, the report was referred back to the committee for corrections.

Journalizing the Proceedings.—Dr. N. S. Davis, said that, upon reflection, he was convinced that some amendments

ought to be made to the former report of the committee, and he therefore offered the following amendments:

Resolved, That the interests of the Association would be promoted by the publication of its transactions in a weekly medical journal under its own control, instead of in an annual volume as heretofore, provided it could be done without involving pecuniary embarrassment, or so far engrossing its funds as to prevent the annual encouragement of original investigation by its members.

Resolved, That so much of the report of the committee on printing the transactions as relates to the increase of membership of this Association by application from members of State and local societies be and the same is hereby approved.

Resolved, That so much of the report of the committee in journalizing the transactions of the Association as relates to the appointment of a board of trustees, nine in number, and their duties, be and the same is hereby adopted, and the President of the Association should appoint a special committee of seven to recommend to this meeting of the Association the names of nine members for election to constitute said board of trustees.

Resolved, That the board of trustees so appointed be requested to agree upon a plan of a medical journal, to be called the *Journal of the American Medical Association*, and to send circulars explaining such plan, and asking pledges of support by actual subscriptions, to the members of the medical profession throughout the whole country, and thereby ascertain as reliably as possible what degree of support the proposed journal can have as a basis for commencing its publication; and that said board also proceed to ascertain and agree upon the best methods of publishing said journal, the best editorial services it can secure to take charge of the work, and the best plan for its issue.

Resolved, That the said board of trustees be and are hereby instructed to retain under all circumstances, in whatever plans or contracts proposed for adoption, entire control over the advertising as well as other pages of the journal that is proposed to be established, and that said board report in full at the next meeting of this Association, the plans upon which it has been able to agree, together with the response of the profession to its circular asking actual subscriptions to the proposed journal, and that the constitutional amendments proposed by Dr. Packard last year be continued upon the table until the report of the board of trustees is received and acted upon.

Resolved, That the Treasurer of this Association is hereby authorized to pay out of the funds in the treasury the necessary expenses of the board of trustees in printing and distributing its circulars and in conducting its proper correspondence.

Resolved, That the Committee of Publication proceed to publish the proceedings and transactions of the present meeting in a volume as heretofore, using all diligence to give it an early distribution to those entitled to receive it.

Dr. Davis supported his amendments in an earnest speech, and they were equally as earnestly seconded by Dr. Brodie, of Michigan, and were unanimously adopted.

Subsequently the President appointed the following as a committee to appoint the board of trustees, in accordance with the resolutions, viz: Drs. L. A. Sayre, of New York; J. M. Toner, of District of Columbia; J. Foster Pratt, of Michigan; R. J. Dunglison, of Pennsylvania; Robert Battey, of Georgia; W. J. Peck, of Iowa, and H. O. Marcy, of Massachusetts.

Dr. A. L. Gihon, United States navy, presented a resolution, which was laid on the table, urging that medical men should be called as experts only by the courts.

Dr. Gihon also offered resolutions, in effect, petitioning Congress to renew or increase the appropriation for the support of the Army Museum and Library, which were tabled.

Dr. Gihon offered the following, which was unanimously adopted:

Resolved, That the American Medical Association heartily endorses and commends to Congress the proposition of the Surgeon General of the Navy to establish at Washington, in connection with the bureau of medicine and surgery of the navy, and in co-operation with the American Public Health Association and the American Medical Association, a national museum of hygiene, which shall exhibit the history and progress of sanitary science by a collection of publications, articles, models, drawings, etc., illustrating defects and improvements in food, in water supply, bedding, clothing, marine architecture, house and hospital construction and removal of excreta and refuse, culinary, laundry, and bath facilities, and for physical culture and exercise, and whatever else tends to the preservation of health and the prevention of disease.

Resolved, That this Association earnestly urges upon Congress the appropriation of the sum of \$10,000 which has been recommended for the purchase of exhibits and their

consequent care and preservation; and that the permanent Secretary shall without delay send a copy of these resolutions to each member of the Senate and House of Representatives in congress assembled.

Dr. Davis offered the following which was adopted, and the Secretary instructed to forward a copy of the same to each member of Congress;

Whereas, There are now employed between sixty and seventy physicians in the United States Indian service, and

Whereas, All physicians appointed to positions in the United States Indian service are required to be graduates of some regular medical college, and

Whereas, There are now between 150,000 and 200,000 Indians depending entirely upon these appointed physicians for all medical and surgical treatment, and

Whereas, The present humane policy of the government is rapidly advancing the Indian civilization, thereby lessening the dependence in, and consequent power of the "Indian Medicine Man," and greatly increasing the demand for, and labors of the regularly qualified physician; therefore be it

Resolved, That the constitution of the American Medical Association be so amended as to provide for the admission to its membership of two delegates from the medical bureau of the United States Indian service, to be nominated by the Surgeon-in-Chief of the Indian medical bureau and appointed by the Secretary of the Interior.

Resolved, That the resolution shall take immediate effect.

Dr. Toner, of Washington, submitted the report of the Committee on Necrology, which was referred to the Committee on Publication without reading.

Dr. Davis, from the Committee on "Atmospheric Conditions and their Relations to the Prevalence of Disease," reported that in accordance with the action of the last annual meeting, stations of observation had been established at Boston, New York, Philadelphia, Baltimore, Charleston, New Orleans, Cincinnati, Pittsburgh, Chicago, St. Paul, Denver and San Francisco. The committee secured the services of Prof. J. H. Long, to prepare the material and supervise the work for determining the relative proportions of the ozone and other active oxidizing agents in the atmosphere in the several localities. Through the efforts of Prof. Long, a number of eminent professional men of the country were secured to co-operate in the work, in which the United State Signal Service was also induced to co-operate, and to which the committee acknowledges itself under great obli-

gations. The actual expenditures of the committee were \$209.72, leaving \$290.28 of the sum appropriated for the purpose unexpended, which will enable the committee to continue its work another year as prosecuted the past year, but the committee cannot make such other investigations as it seems to it essential should be made.

The report concluded with two resolutions, one for the continuance of the committee, with the unexpended balance of the appropriation of last year to remain at its disposal, and the other recommending an appropriation of \$500, for the employment of Prof. Long, as above suggested.

The report was adopted.

Address in Surgery.—Dr. Wm. A. Byrd, of Quincy, Ill., announced as his subject *Excisions of Portions of the Alimentary Canal Covered by Peritoneum*. He said the history of excisions of portions of the alimentary canal dates back but a few years, and is the result of evolution, beginning with McDowell's first ovariotomy. In obstruction from stricture, medicine had failed for ages to afford relief, and surgery offered in hope. Occasionally where the constriction was caused by the strangulation of an extruded bowel in hernia, the intestine would slough and be thrown out through an abscess, and nature would form an artificial anus. The great fear of entering the peritoneal cavity deterred surgeons from hoping for anything better or resorting to any more radical means for the relief of the poor sufferers. Dr. Nicholas Senn, of Milwaukie, in a very able and exhaustive report to the Wisconsin State Society, says: "The results of the cases of excision of the stomach may not seem promising, but when we come to review the earlier history of anatomy, the picture is nearly as dark; and it must be taken into consideration that many of these operations were undertaken after extensive adhesions had formed and neighboring tissues became involved. May we not hope, with earlier and more accurate diagnosis, that the diseased mass may be removed so as to restore the patient to years of health and usefulness? The details of the operation are so well described in a report of Dr. F. J. Lutz to the St. Louis Medical Society, and published April, 1882, that I forbear to quote. The remarks of the late Dr. John T. Hodgen, relative to the operations, were quoted in length. From the cases and the analogous ones which the author has studied, he draws the following conclusions:

1. Resections of the small intestine may be done to a considerable extent without interfering in any appreciable degree with digestion.

2. Practised under suitable conditions, the operation is to be considered perfectly legitimate.

3. The resection may be performed by bringing the divided ends directly into apposition and closing the abdominal wound, by forming an artificial anus. The second and third procedures expose to less subsequent danger.

4. Resections of fibrous and cicatricial structure, which are probably more frequent than is generally supposed, may cause a radical cure, and the same is the case with epithelioma. On the contrary, resections of cancerous obstructions give only temporary relief, and at a greater risk.

5. By proper diet after the operation, the risk of faecal extravasation may be reduced to a minimum, and the best diet for this purpose is one containing as little fluid as possible.

6. By introducing liquids per anum, and drink in the same way, water is absorbed as by the mouth, and there is no sense of thirst; the flow of intestinal fluids is less considerable and the patient is more comfortable.

My first case was that of a farmer at Seehorn, Ill., aged fifty-five. For years he had been treated for strangulated inguinal hernia, which could not be reduced. I found him with clammy sweat, almost pulseless and unconscious. Cut for the hernia and found eight inches of the ileum and a piece of omentum the size of my hand gangrenous. The bowel had separated at the junction; gangrenous and living portions permitted extravasation of faecal matter. The omentum was ligated just above the gangrenous portion and the gangrenous part cut off. The ends of the ligature were left long so as to hang out of the wound. The sound omentum was dropped into the abdomen. The two ends of the bowel were stitched into the abdominal opening so that any faecal matter would be passed to the outside. They resembled to some extent the muzzle of a double-barreled gun—presenting at the opening. The opening was left large enough to permit the insertion of the nozzle of a syringe into the abdominal cavity so that it might be washed clear of any bits of faecal matter or inflammatory products. The cavity of the abdomen was syringed out with tepid water and a teaspoonful of table salt and carbolic acid to the gallon night and morning. Quinine and nourishing diet were ordered liberally. The patient rapidly recovered, and two months later was operated on for the cure of the artificial anus.

*Heretofore the closure of the articial anus in many cases has been looked upon as a very difficult thing to accomplish;

but I think the plan devised for its cure will make the cases few indeed where it cannot be done.

The paper was referred to the Surgical Section for disposal.

Address in State Medicine.—Dr. A. L. Gihon, after speaking with regret as to the want of interest generally manifested in this subject, justly remarks that until the masses are taught to understand that health is not the hand-maid, but the mistress of success, this subject will not receive due consideration. He continued by saying that so long as society, in its highest development of rank and culture, ignorantly jostles and wedges itself in contracted saloons and drawing-rooms, already defiled by blazing gas jets and defective furnaces, where hundreds of lavishly-dressed human machines be foul the air and poison one another with the noxious gasses and their own effete animal products, in deadlier quantity than the ragged rabble which herd in the open streets, and call this pleasure; so long as godly people drowse and yawn in badly ventilated churches, surcharging their brains and impairing their minds by blood not half aerated; and ungodly ones exhaust their whole reserve nerve force to resist the insanitary influence of the no less badly ventilated thertre and exhibition hall, and call the one pious worship, and the other rational amusement; so long as men toil to amass riches and then build residences, and in the name of luxury and æstheticism, flood them with artificial light and heat to consume the oxygen which prince and beggar both must breathe, and admit the invisible filth by the same sumptuously decorated closet and bath-room, by which they think to exclude the vile necessities of humanity, which prince and beggar alike cannot escape, and call this comfort and refinement; so long as our children are sent to overcrowded, unwholesome schools (sixty-seven cubic feet, reports Sanitary Inspector Moreau Morris, as the average for 715 scholars in a New York primary school of this day), where their eyes are bleared, their hearing dulled, their plastic bodies distorted, and their brains fuddled, and this called education; so long as men and women daily violate in themselves and in their children, the simplest precepts of hygiene; parents countenancing half-dressed daughters, wearing out their strength in unwholesome ball-rooms, seeking the slumber that cannot refresh, only when the dawn appears—some launched upon the world to encounter physical wreck in a thousand channels, where no beacon warns of danger; old men, senators, judges, divines, perchance learned doctors,

uncomplainingly breathing the foul air of public conveyances and apartments, in which every door and window has been carefully closed and every ventilation carefully ignored; streets reeking with filth, which decrepid laborers play the farce of sweeping in broad daylight, while whole blocks of buildings, in fashionable quarters, are hermetically sealed from garret to cellar to exclude night air—what can State medicine hope to accomplish in legislative chambers and halls of Congress, which are themselves evidences of sanitary ignorance, sanitary neglect and sanitary indifference? The indefiniteness of the purview of the State Medicine Section was illustrated by its scheme of organization up to the past year, when it was what Dr. James F. Hibberd justly termed quintuple monstrosity—a single body with five heads of medical jurisprudence, psychology, chemistry, State medicine and public hygiene.

The first annual report of the National Board of Health, which has just appeared enumerates the principal operations which it has undertaken or had in contemplation during the first year or two of its existence. These may be epitomized as follows:

1. The collection of information and advice from the principal sanitary organizations and sanitarians of the United States as to the best plan for a national health organization, including the subject of quarantine, both maritime and inland, and the relations which should exist between State and local systems of quarantine and a national quarantine system.
2. The collection of information with regard to the sanitary condition of some of the principal cities and towns of the United States, with special sanitary surveys of the coast of New Jersey bordering on New York harbor, Memphis, etc.
3. The appointment of a commission to investigate yellow fever in the Island of Cuba.
4. The collection of the sanitary laws of the United States and of the several States, including not only the statutes but the decisions of the several courts on all questions involving the public health.
5. Investigations as to the best method of determining the amount and character of organic matter in the air; as to the effects of disinfectants, and especially the composition and merits of patent disinfectants; as to the adulterations in food and dress; as to the diseases of food-producing animals; as to the flow of sewers in relation to their sizes and gradients; as to the influence of various soils upon sanitation,

especially with regard to drainage and methods of disposal of excretion; as to the outbreak of diphtheria in Northern Vermont, etc.

6. The suggestion of legislation to improve the sanitary condition of the mercantile marine.

During the brief period of its existence the National Board has established an admirable system of sanitary inspection and undertaken, as far as its limited authority permitted, the solution of the problem of inland and maritime quarantine. The Government has a right to prevent the introduction of disease in men and things as an incident of commerce. A national quarantine is necessary not only to secure uniformity over our extensive seaboard, but to give satisfactory protection to those interior States which may be exposed to risk through local regulations, defective in character or framed to suit the special commercial interests of particular ports. How this national quarantine is to be administered is the real matter yet open for discussion. I quote from my colleague in the Navy, Dr. Turner, with whom I unreservedly agree:

"I am disposed, from my own observations and experience, to accept the position of M. Farnal, that the nature of all quarantine is determined by the sanitary condition of the ship. The whole point is to secure a clean ship, clean cargo, clean passengers, clean crew and sailors from a clean port. It is so simple, so plain, that it appears to me it could all be accomplished by the simplest code of naval hygiene—save the clean port, which, of course, is in the domain of municipal sanitation."

The real defense is the establishment of rigid sanitary inspectors at every port of entry where national officers shall investigate all the circumstances of loading the vessel, the climate and sanitary condition of the port whence she has sailed, the route and length of voyage, and themselves inspect cargo, crew and passengers, and determine intelligently whether the interests of the country require her detention one day or fifty days, or not at all.

A more intimate association of the State Boards of Health with each other and the National Board is desirable. These State Boards now differ widely in their organization and authority. The earliest established, most excellent and successful of these, and which has served as the model for all others is that of Massachusetts, but it has been of late years overloaded and crippled by consolidation with the various charitable and reformatory institutions of the State.

The following table gives the States having established Boards of Health, number of men on each Board and the number of physicians on each, the remaining members being composed of lawyers, engineers or business men :

<i>State.</i>	<i>No. Physicians.</i>	<i>Size of Board.</i>
Massachusetts	4	7
California.....	7	7
Minnesota.....	7	7
Virginia.....	7	7
Michigan—not given.....	—	7
Wisconsin.....	6	7
Maryland—majority physicians.....	—	7
Georgia.....	9	9
Tennessee.....	6	8
Louisiana—not given.....	—	9
Illinois.....	5	7
New Jersey.....	4	7
West Virginia.....	8	8
Arkansas—majority physicians.....	—	6
Indiana.....	5	5
Colorado.....	9	9
Iowa.....	7	9
New York—not given.....	—	9
* Alabama.....	—	—
North Carolina—not given.....	—	9
South Carolina—not given.....	—	7

Nine States have not established State boards, as follows: Florida, Kansas, Maine, Missouri, Nebraska, Nevada, Ohio, Pennsylvania and Vermont.

Dr. Gihon then took up the subject of vital statistics, showing the defects in present returns, and giving as an illustration the returns of deaths in Washington city, the ratio per thousand, and the proportion of malarial cases. He claimed that all returns were worthless which did not give the remoter predisposing causes of all diseases from which death resulted.

The remainder of the paper was devoted to a discussion of the proper constitution of State boards of health, the needs of the navy, with an account of one or two innovations which had been introduced on a few vessels, but which had not yet become general, and said that while it was the prov-

* The State Medical Association is constituted the State Board of Health.

ince of the biologist and pathologist to cultivate their bacil-
lous broods, it was the duty of the American Medical Asso-
ciation to show the people's representatives how they should
legislate against the inroads of the insidious enemies of the
public health.

Dr. Henry F. Campbell, in rising to move that the paper
be referred to the Committee on Publication, stated that the
fact that the American Medical Association did not carry
out the great plan, it should not be blamed. The Associa-
tion had been the father of the national board of health, and
at the present time this country was only a few years behind
the foremost country in the matter of sanitary measures.

After some decisions by the Judicial Council of local in-
terest, the Association adjourned until to-morrow at 10 A. M.

FOURTH DAY—*June 9th.*—After prayer by Rev. E. D.
Neill, and after announcements by Dr. Stone on the part of
the Committee of Arrangements, the Librarian, Dr. Wm.
Lee, of Washington, D. C., reported that 167 distinct titles,
exclusive of exchanges, have been added to the Library.
The Library has now 1,702 distinct titles. The Boston Med-
ical Library Association has placed many duplicate periodi-
cals at the disposal of the Library. The report asks that
\$200 be continued as an appropriation, and that \$50 be con-
tinued for the publication of the *Index-Medicus*. The recom-
mendations were adopted.

The Treasurer, Dr. Richard J. Dunglison, of Philadelphia,
reported a balance of \$1,241.38 in the Treasury.

On motion, it was decided to publish an index to all the
recent volumes of Transactions not yet indexed.

Dr. Keller, Arkansas, offered the following:

Resolved, That in many of our large cities in the near
future, if not now, cremation will become a sanitary neces-
sity.

A motion to table was lost. It was then referred to the
Committee on State Hygiene.

A motion to reconsider and have the matter settled at
once, was lost: 28 for reconsideration to 29 against.

The resolution offered on Wednesday by Dr. Denison,
Col., at his request was then taken up. It had been referred
to the Judiciary Committee, and afterward back to the house
for action, but after being discussed it was laid on the table.

The following resolution in regard to expert testimony
was introduced from the Section on State Medicine, by A.
L. Gihon, U. S. A., which was adopted:

Resolved, That it is the sense of the American Medical Association that it will be conducing to justice and the dignity of the profession that medical expert testimony shall be given without having the appearance of being in behalf of either side, but to be stated simply as facts.

Dr. J. G. Thomas, Georgia, offered the following resolution:

Resolved, That the Association approve the organization of Faculties in medicine having no other foundation than the examination for degrees as a measure which will increase the value of the present methods of education in medical colleges in this country.

Dr. Davis said the requirements of the resolution would make more requirements from students and make their examination impartial. The resolution cast no slur on any faculty, neither did it limit in any way their present powers; he was a teacher, and had been for thirty years.

Dr. Garcelon, of Maine, opposed the resolution and moved that it be laid on the table.

The result was obtained by a rising vote—ayes 75 to lay on the table, and 132 against.

Dr. Ranshoff, of Cincinnati, was opposed to this plan, as it would cause additional expense, and it was a slur on teachers in the country. He favored a national law, but until that was had such a resolution was of no use.

Dr. Gihon was opposed to taking down the bars. He also opposed fighting the homœopath, as the fight that has been made on them was giving them a trade mark. He read abstracts from graduates of colleges who had applied for credentials from an examination committee of which he was a member. The papers, because of the numerous and bungling treatment advised in different cases, were greeted with shouts of laughter. Dr. Gihon then asked if this was not an indication that something should be done at once.

• Dr. Carpenter, Kansas, thought the fact of the graduates being so poorly informed was owing to the State Universities being governed by politics, and that the homœopaths being better politicians than the allopaths, caused that class to set the standard in the colleges.

Dr. Davis said he was fully in favor, and had been for thirty years, of the principles of independent examination; but now having brought the matter to the notice of the Association, thought that the same be further postponed. This was done by a unanimous vote.

• Dr. Dennison offered the following, which was adopted:

Resolved, That no action of this Association, either in its code or its annual meetings, shall be construed to commit members of the American Medical Association to the adherence of any dogma, and members should have a care not to allow their names to be erroneously registered as allopathists, etc., in State and city registration of physicians.

A motion was made to vote the usual amount to the Secretary for his work, provided that amount was left in the treasury after defraying the expenses of the publication of the journal.

Dr. Toner thought \$500 was sufficient. The motion to make the sum \$500 was lost, and \$1,000 ordered paid the Secretary, subject to the condition of treasury.

Dr. Toner gave notice of a change in the Constitution so as to make the Secretary serve without compensation.

Dr. H. Goodwillie's amendment to article 11, section 8, permanent members, strikes out the words "but without the right of voting."

Dr. Pratt, of Michigan, offered an amendment to article 13 of the by-laws, altering it so as to read that none but members present shall be eligible to the office of President, First Vice-President, Secretary, Treasurer, Chairmen of Sections, and members of the Judicial Council.

Dr. Keller announced an amendment allowing the Committee on Nominations until a date as late as September after the annual meetings, to select the place of meeting. Laid over by rule for one year.

A resolution by Dr. Lawrence, of New York, was laid on the table.

Resolved, That the President of the American Medical Association appoint a committee consisting of one representative from each State, whose duty it shall be to investigate the subject of the feasibility of creating and endowing such an institution as shall, in their judgment, meet the demands of this age of investigation and progress; and that said committee shall include in their report at the next annual meeting, a more exact character of the school we need and the ways and means that will best conduce to the accomplishment of the undertaking.

Dr. Keller, of Arkansas, moved that the Secretaries of the State Societies send annually to the Secretary of the American Medical Association a list of the members dropped from the State Societies. Adopted.

N. S. Davis introduced the following, which was adopted:

Resolved, That after the next annual meeting the perma-

ment interests and influence of this Association would be best promoted by again holding every second meeting in Washington, as it home on common national ground, and not as invited guests, while each alternate meeting should be held in such section of the Union as would be most useful in promoting the society organizations in all parts of our country.

The matter of nominations having been referred back to the Committee on Nominations, they again submitted a report. The place for the next meeting is Cleveland Ohio, and the following is the list of officers for 1882-3 :

President—Dr. John L. Atlee, Philadelphia.

Vice-Presidents—Drs. Eugene Grissom, North Carolina; A. J. Stone, Minnesota; J. A. Ochterlony, Kentucky; H. S. Orme, California.

Treasurer—Dr. R. J. Dunglison, Pennsylvania.

Librarian—Dr. C. H. A. Kleinschmidt, Washington.

Chairman of Committee on Arrangements—Dr. X. C. Scott, Cleveland, Ohio.

Assistant Secretary—Dr. I. N. Hines, Cleveland, Ohio.

Members of Judicial Council—Drs. N. S. Davis, Illinois; J. M. Brown, United States Navy; X. C. Scott, Ohio; M. Sexton, Indiana; N. C. Husted, New York; Wm. Lee, Maryland; J. E. Rives, West Virginia.

Chairmen of Sections.—Practice of Medicine—Drs. J. H. Hollister, Illinois, chairman; J. G. Lee, Pennsylvania, secretary.

Surgery and Anatomy—Drs. W. F. Peck, Iowa, chairman; Paul F. Eve, Tennessee, secretary.

Obstetrics—Drs. J. K. Bartlett, Wisconsin, chairman; G. A. Moses, Missouri, secretary.

Medical Jurisprudence and State Medicine—Drs. Foster Pratt, Michigan, chairman; Thos. L. Neal, Ohio, secretary.

Ophthalmology, Otology and Laryngology—Drs. A. W. Calhoun, Georgia, chairman; Carl Seiler, Pennsylvania, secretary.

Diseases of Children—Drs. R. Blount, Indiana, chairman; J. H. Sears, Texas, secretary.

Dentistry—Drs. D. H. Goodwillie, New York, chairman; T. W. Brophy, Illinois, secretary.

Committee on Publication—Drs. W. B. Atkinson, Albert Frincks, J. S. Cohen, F. Woodbury, J. H. Packard, J. R. Dunglison, J. V. Shoemaker.

Committee on State Medicine—Arkansas, D. C. Ewing; California, J. O. Tucker; Colorado, C. Dennison; Connecticut, W. C. Willey; District of Columbia, D. W. C. Patter-

son; Dakota, S. B. McGlumpt; Georgia, H. F. Campbell; Illinois, H. A. Johnson; Indiana, T. M. Stevens; Iowa, D. W. Crouse; Kansas, J. Bell; Kentucky, T. B. Greenly; Louisiana, J. W. Dupree; Maine, F. B. Fergusson; Maryland, Wm. Lee; Massachusetts, M. G. Parker; Michigan, R. C. Kedzie; Minnesota, C. N. Newitt; Mississippi, H. A. Grant; Missouri, E. W. Schaufler; Nebraska, E. M. Whillen; New Hampshire, J. A. Stanborn; New Jersey, D. C. English; New York, E. M. Moore; North Carolina, C. W. Woollen; Ohio, J. Ransohoff; Pennsylvania, A. H. Smith; Rhode Island, J. N. Eldridge; Tennessee, V. S. Lindsley; Texas, W. H. Parke; Virginia, F. D. Cunningham; Vermont, S. W. Thayer; West Virginia, John Frizzel; Wisconsin, J. T. Reeve; United States Army, W. C. Spencer; United States Navy, A. L. Gihon; United States Marine Hospital Service, F. W. Miller.

The report was unanimously adopted.

Dr. Sayre said that the duty of the committee in selecting a board of trustees in regard to journalizing the Transactions was a very important one. In making the selection, the committee had been hampered by the resolution passed on Thursday, to the effect that non-attending members were not eligible, as some of the oldest and ablest members of the Association were unable to be present at this session. The trustees appointed by the committee were as follows:

For Three Years—Drs. Davis, Chicago; Moore, New York, and Toner, Washington.

For Two Years—Drs. Campbell, Georgia; Packard, Pennsylvania, and Connor, Michigan.

For One Year—Drs. Hooper, Arkansas; Garcelon, Maine, and McMurtry, Kentucky.

Address in Dentistry.—Dr. D. H. Goodwillie, of New York city, in making this, the first address, as chairman of such a Section, spoke respecting the divisions of the Section, which naturally separates itself into a number of branches. These divisions are dental art and oral surgery. The first is nearly all mechanical in its nature. The second includes the treatment of all diseases of the mouth. To the proper practice of the latter, it is necessary that there be added the experience of the former, with a practical knowledge of medicine and surgery. Such knowledge should be supplied from the chairs established in all our medical colleges, the practical department to be supplied by infirmaries and hospitals to give this knowledge. He illustrated the many diseases of the mouth and associate parts by cases in his own experi-

ence, exhibiting diagrams, photographs, instruments, and over twenty wax models of notable cases. Among them were inter-nasal and inter-oral extirpation of the bones of the nose and jaws with a reproduction of bone without any deformity.

Delegates to Foreign Societies.—The President then announced the following as delegates to the foreign societies: Drs. T. A. Emmet, D. Lewis, W. M. Carpenter and E. M. Brush, New York; and J. M. Da Costa, Pennsylvania.

The President was conducted to the chair, and was gracefully received, and gracefully acknowledged the compliment bestowed on him.

After numerous votes of thanks, a motion to adjourn was made by Dr. Toner, and the thirty-third annual meeting of the Association declared adjourned, to meet in Cleveland, Ohio, 1883.

Trustees of the Journal—An Organization Effected.—At the close of the session the members of the Board of Trustees of the Journal of the American Medical Association met on the stage. There were present Drs. N. S. Davis, Chicago; J. M. Toner, Washington; O. P. Hooper, Arkansas; H. F. Campbell, Georgia, and Leartus Connor, Michigan. They organized with Drs. N. S. Davis, President, and F. H. Packard, of Pennsylvania, Secretary. On motion, the President was authorized to secure, by the aid of the Secretary, the publication of the report of the committee on a journal of the American Medical Association, and the resolution of Dr. Davis adopted by the Association, and distribute the same as soon as possible to all the members of the Board of Trustees and such other persons as they may deem proper. The committee then adjourned, Dr. L. Connor acting as secretary *pro tem*.

The "relative recess," as the *Pioneer* styles the entertainments after the adjournment of the session, were in every way most hospitable, excellent and enjoyable.

PROCEEDINGS OF SECTIONS.

PRACTICE OF MEDICINE, MATERIA MEDICA AND PHYSIOLOGY.

FIRST DAY—*June 6th.*—Chairman, Dr. John A. Ochterlony, of Louisville, Ky. In the absence of Dr. Roberts, of Nashville, Dr. T. N. Reynolds, of Detroit, was chosen Secretary.

Systematic, Antiseptic and Germicidal Home Treatment of Pulmonary Consumption.—Dr. J. Hilgard Tyndale, of New York city, forwarded a paper which was read by the Secretary. After an exhaustive definition of consumption—its causes and effects, and its destructive processes, the author gave the following factors which go to make up a clerical picture. 1. A destructive process in the lung itself. 2. General septicæmia or blood poisoning. The therapeutic plan deduced was divided into three heads (*a*). Antiseptic treatment of the local lung lesion (*b*). Antiseptic treatment of general septicæmia (*c*). Aiding digestion and assimilation in order to enrich the blood and through it to rebaptize the nervous centers and the muscles (primarily the heart and diaphragm) with normal blood. The author went on to describe his modes of treatment with the instruments used and the prescriptions. In conclusion four counts were given, as follows: .

First. To change more or less frequently the antiseptic in the treatment of the local as well as of the general lesion, namely: (*a*) where the antiseptic first employed no longer seems as efficient as at first; (*b*) on the principle that change of remedies of the same class enhances the benefit desired from them.

Second. To alternate as to the route by which the remedy is administered both in general and local treatment, (*a*) whenever there is the slightest tendency to irritation of the mucous membrane where introduced; (*b*) it gives a rest to the route first employed and enhances the benefit derived from the remedy.

Third. To call into aid two routes at once, either in general or local antiseptics, or both.

Fourth. Employ a different antiseptic for each route.

A motion was carried to return the paper to Dr. Tyndale with permission to publish it in any medical journal, coupled with the statement that it had been read before the Section.

Therapeutic Action of Chlorate of Potassium.—Dr. John V.

Shoemaker, of Philadelphia, read a paper on this subject. This powerful, energetic and active drug was discovered about 1786, by Berthollet, and was used for the first time by Fourcroy in 1796, with the idea that it might transmit some of its oxygen to the body. At its introduction, this salt was principally recommended as an antidote to scurvy; Chaussier proposed it as a remedy in croup. It had completely fallen into oblivion, when Dr. Blanche, repeating the experiments made in 1847, by Hunt and West in the treatment of gangrene of the mouth and pseudo-membranous stomatitis, was led to try it in the treatment of pseudo-membranous sore throat and croup. The Doctor added that he had met with marked and decided success from its internal use in scrofulous skin diseases; likewise Dr. M. Landesberg, of Philadelphia, had reported very gratifying results from its topical application in epithelioma of the eyelids. In speaking of its physiological action, he remarked that the use of this salt is said to be largely due to the great amount of oxygen which it contains, and therefore it is looked upon as the most potent agent in the treatment and cure of all maladies dependent on suboxidation or defective nutrition, secretion, excretion, æration and molecular metamorphosis. Dr. Shoemaker passed to the consideration of its therapeutic uses, showing that it acts in some hitherto unexplained manner in abnormal conditions of the blood, changing its character, and overcoming morbid states. In speaking of its external application, he said that the utility of this salt as a gargle in the treatment of mercurial salivation and ulcers of the mouth and throat is universally attested. In the proportion of a drachm to a glassful of water, it is of service as a gargle in the various varieties of stomatitis, often quickly relieving the dry, red, and follicular congestion of the mucous membrane, and healing the ulceration when it exists. As a local application and gargle in inflammation and ulceration of the tongue, patiently and long continued, more particularly in the latter, it seems to do more good alone at times in combination with astringents, than any other remedy. Used either as a gargle, or applied locally with a brush or by atomization, in simple catarrh of the anterior and posterior nares, and in simple and chronic catarrh of the larynx, it has been constantly used in many positive and curative actions.

He has used a solution of chlorate of potassium, one or two drachms to a half a pint of water, as a gargle in diphtheria and phthisis. In subacute and chronic stages of otorrhœa, an injection of chlorate of potassium in the strength of five

to ten grains to the ounce of water is often effective. In ozæna, a douche of a solution of chlorate of potassium in the proportion of one drachm to a pint of water will cleanse and thoroughly disinfect the parts.

As an injection also in leucorrhœa, in the strength of one or two drachms to a quart of water, it will often prove very useful by lessening the discharge and relieving all congestion of the parts. In gonorrhœa, used as an injection, two or three times a day, in the proportion of five or ten grains to an ounce of water, it will very often produce an alterative impression upon the parts, and completely arrest the discharge. As an injection in chronic dysentery, in moderately strong solutions, say ʒj of potassium chlorate to water, f. ʒj, its use has been recommended.

Chlorate of potassium will bring about a beneficial effect in chancre, applied either as a solution or dusted over the parts; also in obstinate and chronic ulcerations, gangrenous sores and ulcers, discharging fetid secretion, either alone or dissolved in water. In pustular eczema, the use of a solution containing one or two drachms to the pint of water, applied with oil muslin, will very frequently lessen the discharge and heal the surface.

Chlorate of potassium as a remedy in croup and diphtheria has been used with great advantage by many eminent and experienced practitioners, from the time that it was first successfully applied by Chaussier in 1819, then by Hunt, Blanche, Isambert and Drysdale and others up to the present day. It should, in both these maladies, be given in decided doses, in from five to thirty grains, three or four times daily.

He has secured marked benefits in phthisis. In marasmus, particularly in children, the use of small doses of this salt has a very satisfactory and beneficial influence. He has administered from one to three grains, three or four times daily, to weak and puny infants, who would regain their nutrition and fatten on its use in conjunction with good food. In anæmia, it acts upon the relaxed mucous membrane of the digestive tract and so restores its functions.

In the eruptive fevers, such as scarlatina, morbilli, rotheln and erysipelas, full and often repeated doses will very often fill the surface with arterial blood and bring out an abundant crop of the eruption. In erysipelas, it may arrest the poisoned state of the blood, and diminish the tendency of suppuration in the parts. It has also been said by some observers to be of service in typhus and typhoid fevers. For

diseases of the skin, chlorate of potassium given in various doses according to the ability with which the patient bears the drug, is of the greatest value either in modifying or curing very many cutaneous affections. It is especially efficacious in ecthyma and in boils, carbuncles, styes, pustular acne, pustular eczema and sycosis; it lessens the tendency in many to suppuration, and should this latter condition be established before administering the salt, it will be largely instrumental in overcoming the abnormal state of the system. Its effective action in carbuncles was very recently reported by Dr. Boardman Reed, of Atlantic City, at a meeting of the Philadelphia County Medical Society, September 22, 1880. Dr. Reed stated that the salt had been used upon Dr. Shoemaker's recommendation who was in consultation with him. The patient, a young girl who had two carbuncles, one on the back of her neck, and the other in front of the ear; they afterwards extended until the affected area was about five inches in extent. The patient was very weak. She became feverish and the pulse was rapid and feeble; very little hope of her recovery were entertained until chlorate of potassium was used in decided doses. Under good food with iron, she rallied and became quite well.

He read his first observation upon the action of the drug in 1880, before the Section of Practice of Medicine, New York city, since that time he has not only had continued good effect from this salt, but has also had from many physicians letters and short accounts of cases, commending the action of the drug and corroborating the results he reached. The Doctor further showed the good effect produced from its use in scurvy, influenza, yellow fever, rheumatism, cyanosis, hemorrhagic diathesis, dropsy, syphilis, etc., and then gave the manner of its administration. If the salt is given in small doses, it will pass quickly and more readily into the circulation taken before meals, diluted with water. If, on the other hand, very large doses are administered it will probably be better borne by the stomach after meals. The dose will vary according to the affection and the condition of the patient. He usually gives it in from one-half to thirty-grain doses every one, two or three hours, freely diluted with water. In the above doses, it is well borne by the stomach, even in those who are very weak and enfeebled. He generally begins with a small dose and gradually increases it until the patient shows some sign of its effect, or he sees improvement in the disease. Those who are large, flabby, and apparently vigorous, will improve under smaller doses, as

large amounts will sometimes serve to still more increase the quantity of fat on the body. On the other hand, the pale, weak and enfeebled will bear much larger doses, and will often increase very rapidly in weight.

Dr. Hollister, of Illinois, did not think the physiological action of the drug when administered in large or small doses, as the case might be, had been sufficiently brought out.

Dr. Shoemaker had read only an abstract of his paper, which was very lengthy, and then re-read portions referring to the physiological action, and said that the exact action was a matter not only of dispute but of mystery.

Dr. Hollister wanted to know the *modus operandi* of the drug upon the circulation and upon the tissues affected by scrofula, etc.

Dr. Grant, of New Jersey, believed that all destruction of the tissues was by fermentation, and that chlorate of potassium acted as a powerful antiseptic in checking the fermentation.

Dr. Bennett, of Michigan, believed the drug acted as a sedative or an anti-phlogistic or eliminated noxious matter from the system. He is a strong believer in chorate of potassium.

(A voice)—Do your patients die or get well?

Dr. Bennett—Some of 'em die and some don't. How is it with yours? (Laughter.)

Dr. Davis, of Chicago, believed the drug increased the capacity of the blood to hold in solution oxygen taken from the air cells of the lungs; also in the diffusion of oxygen in the serum. He was sorry the author had not added to the knowledge of the agent by experiment.

Drs. Lester, of Missouri, Bell, of Kansas, and Boyd, of Indiana, participated in the discussion, which was closed by Dr. Shoemaker. The latter claimed that his paper showed the therapeutic action of the drug in many diseases which are not to be found in any works on *Materia Medica*. He further stated he had used the drug upon himself in a case of diphtheria, and in personal cases among his friends.

Dr. Hollister stated that twenty-five years ago the question of the uses of chlorate of potassium was warmly discussed, and an enthusiast in the matter, Dr. Fountain, of Iowa, went home and undertook to experiment upon himself. In less than a year he died from an overdose of the drug which produced acute gastritis.

Dr. Kaufman, of Nebraska, moved that Dr. Shoemaker's

paper be referred to the Committee on Publication, with instructions that it be printed, and it was so ordered.

Dr. Campbell, of Georgia, made a verbal report relative to narcotic poisoning. He claimed being an anti-tobacco-nist—said he used it, but he knew habit was a second nature, and hoped that some suggestions might be made as to the proper dose of nicotine or some such agent to be administered in diminishing quantities, to secure a cure of the habit of using tobacco when such a cure became necessary. Why not treat the excessive user of tobacco as you do the habitual drunkard or slave of opium.

Dr. Cook, of Tennessee, believed there was no need of the minute dose. He had found himself cured by a severe attack of illness, during which he lost the appetite for the weed.

Dr. Ochterlony stated that in some classes of disease, such as cancer of the stomach, even in incipient stages, patients who had been a slave to tobacco lost all taste for it.

SECOND DAY—*June 7th.*—Dr. J. C. Tucker, San Francisco, Cal., presented for Dr. Gibbon, of his city, by title, a paper on *Astringent Plants of the Pacific Coast*, which was referred to the Committee on Publications.

Treatment of Syphilis by Subcutaneous Injections of Corrosive Sublimate.—Dr. John V. Shoemaker, of Philadelphia, Pa., spoke at length on this subject. He referred to progress in medicine due to the introduction of the hypodermic method of treating diseases; from its first use by Alexander Wood, of Edinburg, whose experiments date since 1853, up till the present time. Some three or four years ago, he began this treatment in all the syphilitic patients presenting themselves at the dispensary for skin diseases. In his practice he usually selected for his hypodermic injections a good glass syringe. Experience has proven that these were the best, the metal ones being unsatisfactory owing to the metal becoming corroded in using the sublimate solution; the hard rubber syringes were too fragile to answer the purpose, it needing but slight manipulation to break them. To these syringes he ordered specially long needles, the other needles not penetrating deeply enough, thus endangering abscess. Where a long needle is used and driven down to the cellular tissue, no injurious results will follow. He also used different needles for different patients to prevent contagion. In using the solution, he usually began on weak patients with one-eighth grain (10 minims) doses, and continued the same

every day until the disease showed signs of abating or the patient experiences the constitutional effects of the drug.

In stronger subjects, he began the dose at the same quantity, and gradually increased it, minim by minim every second or third day, until the result had been obtained. After the patient had received a full mercurial impression in the manner above given, in case any of the syphiloderm should still be present, the doses were gradually diminished, just giving a sufficient quantity to keep the system under a gentle influence until all traces of the disease had disappeared. In some of the cases, especially those of an obstinate character, he was compelled to push the drug until he obtained the constitutional effects, which were marked by headache, vertigo, hyperæmia of the mouth, gums and cheeks, increased flow of saliva, difficulty of mastication, disturbances of digestion and diarrhœa before the syphiloderm would disappear. In others—who were peculiarly susceptible to mercury, all the constitutional effects followed after several injections of one-eighth grain, although he tried the peptones, chloride of ammonia, water and glycerine—together and separate at various times—without avoiding the stomatitis that Dr. Martineau has since reported did not result in his hands with all the above-named combinations. He was always compelled in these cases to begin with one or two minims of the solution and gradually increase the dose, minim by minim, until he reached the point where the patient showed slight evidence of intoxication from the drug; and then decrease it. After using all the various combinations upon the cases under his care, he came to the conclusion that plain water and the sublimate gave the best results.

The parts which he usually chose for injections were the infra-scapular and sacral regions, which are the least sensitive and are also supplied with a large quantity of subcutaneous cellular tissue in which to inject the solution. He also made injections into the gluteal regions, on either side, into the tissues on the side of the thorax and into the thighs and legs; but his conclusions are that the infra-scapular and sacral regions are decidedly the best, as in his experience the pain of the injection is not so great or persistent as in the other parts. He fills the syringe with the sublimate solution, and with the needle pointed, open, and well oiled, he picks up a fold of the integument, on one of the regions just named, with the forefinger and thumb of the left hand, and with the right previously everting the syringe and tapping it slightly, and then forcing out the air he drives the needle

down deep into the cellular tissue, while he gently presses the piston to force out the contents. The needle is then slowly removed by rotating with the forefinger and thumb of the right hand, whilst the fingers of the left are used in pressing back the skin from its adherence to the needle; also in pressing out and distributing the solution in the surrounding cellular tissue, and in covering the point of the puncture of the needle, after which the syringe and needle are always well washed in plain water, oiled, and a bristle run through the needle.

The skin surrounding the puncture would become a little red or swollen in a short time, which would disappear at longer or shorter intervals—at the most, in a few days, though in some cases they would remain for a time, forming hard spots, which would eventually disappear by degrees, leaving no bad results. In the 113 cases treated, there were neither inflammation nor abscesses. Many of the patients to whom he gave the sublimate injections had had mercury previously given by the mouth without any decided results, either upon the disease, or any toxic evidence of the absorption of the mercury by the intestinal canal. Others were totally unfit to receive the drug internally, being debilitated and broken down, or having weak digestive organs and an irritable state of the intestinal tract. In such patients, it is poison in the system. It also enables the physician to give tonic remedies by the mouth, together with a good substantial and nourishing diet which can be properly digested, and the combination will act promptly and effectually upon the disease.

He believes this method to be the most speedy and certain way of eradicating syphilis, and preventing loss of flesh and vigor of the body that unquestionably follows pouring digestive mercury or iodide of potassium into the stomach. The latter organ, and the intestinal canal, becoming irritable, the more the secretions become deranged, and the patient is usually debilitated and broken down in all respects after he recovers from a successful course of syphilitic elimination, the after effect being almost as bad as the former disease; or in case any trace of the syphiloderm remains, the system is too weak to pursue further the internal administration of the drug. It is the belief of Dr. Shoemaker, where the hypodermic use of the sublimate has failed, it has been entirely due to the carelessness of the operator.

Dr. Gallagher, of Pittsburg, spoke in favor of the views advanced by Dr. Shoemaker, especially the original work that he had so ably deduced.

Dr. J. H. Bennett followed, and stated that he had made the same observations of great gastro-intestinal irritation that is often set up by giving corrosive sublimate by the mouth. He was very much interested in Dr. Shoemaker's paper, and when he returned home he would give that method a trial.

Dr. Frey, of New York, commended the results of the author, and, on motion, the paper was referred to the Committee on Publications.

THIRD DAY—June 8th.—Salicylate of Potassa in Acute Rheumatism and Dyspepsia.—Dr. M. Donelly, of New York city, stated that two-and-a-half years of the use of salicylate of potassa has proved the usefulness of the drug for the cure of acute rheumatism. Previous to its introduction, the treatment of the disease by alkalies proved at once correct in principle, safe and certain in practice, neutralizing the acid and restoring the blood to its normal alkalinity, but slow in action. When salicylic acid was introduced, physicians hastened to prescribe it. But it was soon found that very large doses of the remedy were required to obtain the desired results, and that such large doses cause, in a majority of cases, serious heart complications. Salicylate of soda superseded this preparation and was found a safer remedy, yet not quite free from the danger of inducing pericarditis and endocarditis, for though the combination of the acid with soda promised well in theory, it has disappointed the expectations looked for, and I think because the drug, being a neutral salt, is not sufficiently alkaline to correct the acidity of the blood in acute rheumatism, and so long as the blood remains acid the danger of heart disease will exist. This theory has been proven correct by numerous eminent physicians the world over. My own experience bears out the above statement. But I was convinced that there was merit in salicylic acid, provided it could be employed with safety, and I made some experiments, hoping to find some alkali in greater proportion than soda, so as to produce a thoroughly alkaline salicylate, which I finally found in the bicarbonate of potash.

Two parts of bicarbonate of potash and one part of salicylic acid dissolved in a little water, formed a neutral solution. The potash was then increased in quantity until one part of the acid united with two parts of potash—say ten grains of acid to twenty grains of alkali in a drachm of water—formed a clear alkaline solution. This solution evaporated to dryness, left a strong alkaline salt of grayish color,

sweetish taste, soluble in double its weight of water, which I called salicylate of potassa. The action of this remedy is very rapid. It becomes absorbed rapidly, and its influence is felt in a few hours in mitigation of pain. In mild cases the urine and perspiration become alkaline in character in a few hours, but in severe cases several days are required to effect these secretions. This point once reached, improvement is progressive. The sediment in the urine disappears, the metastatic character of rheumatism goes with it, and the case goes on to recovery. The remedy is used until all pain and swelling are relieved, and it is then necessary to guard against relapses, which appear at this stage, owing to the lessened powers of resistance to cold of the patient, caused by thinness of the blood. To establish the rich, warm, normal condition of the blood is most readily accomplished by the use of an alkaline form of iron, and the best of all is tartrate of iron and potassa. As to the causes of rheumatism, most all physicians agree that abnormal digestive secretions take a prominent part in forming the lactic acid in the blood.

This remedy is too valuable in the treatment of flatulence, pyrosis, heartburn and loss of appetite—in fact all symptoms of dyspepsia of the acid form—to be passed without mention. Its power in controlling fermentation first led me to prescribe it in flatulence given in powder after meals. It not only relieved this symptom, but digestion improved under its use. With an experience of over two hundred cases of dyspepsia cured by salicylate of potassa, I can unhesitatingly recommend it for any of the bitter tonics. It will be found successful in nine cases out of ten, the tenth one requiring mineral acids, owing to the bilious condition of the patient.

Dr. Hollister said that in Chicago there was much rheumatism. He used the salicylates with much more benefit than was obtained with other remedies. He used fifteen-grain doses of salicylic acid every three hours to reduce temperature. Its use should be guarded on account of its depressing influence on the heart's action. Salicylates were a local sedative to the nerve-extremities in the mucous membrane of the stomach.

Dr. Wykoff, of Buffalo, found anodynes unnecessary in rheumatism; he used salicylate of potash, with great benefit.

Dr. Gallaher, of Pennsylvania, found salicylate of soda good in rheumatism, and doubted the advantage of salicylate of potash over that of soda.

Dr. Thos. N. Reynolds, of Detroit, had used salicylate of soda with benefit frequently, but not invariably, in rheuma-

tism. Believed cases should be selected, if possible, in the administration of any form of treatment. Had seen good results from hourly minim doses of hydrochloric acid in water alone, in acute rheumatism, which suggested to him that the alkaline treatment was not always an indispensable element in the treatment of rheumatism. Constitutional and local miasmatic and climatic influences, often determined the line of treatment; and we should not rely too exclusively on any one drug or plan of management.

Dr. Kyle, of Indiana, thought salicylates of soda and potash useful; but found quinine and iron indispensable in malarious districts.

Dr. Shoemaker, of Pennsylvania, thought potash was required in the blood in rheumatism.

Dr. John A. Ochterlony thought the soda and potassa salicylates were not particularly applicable in recent and very acute cases with high fever. In the obese, alkalies were more beneficial. In sthenic cases aconite and veratrum viride often produced most rapid and satisfactory results. In the anæmic and weak he preferred large doses of tincture of the chloride of iron.

Dr. Ochterlony said that the acting secretary, Dr. Thomas N. Reynolds, who had performed all the onerous duties of secretary without the honor of a previous election, deserved the thanks of the Section.

The following resolution, offered by Dr. T. B. Lester, of Missouri, was passed unanimously:

Resolved, That the thanks of the Section on Practice of Medicine, Materia Medica and Physiology be tendered the officers, Dr. John A. Ochterlony, chairman, and Dr. Thomas N. Reynolds, secretary of said Section, for the faithful, courteous and efficient discharge of their respective duties.

On motion, the Section adjourned.

SECTION ON SURGERY AND ANATOMY.

FIRST DAY—*June 6th.*—On motion, Dr. William A. Byrd, of Quincy, Ill., was elected Chairman, and Dr. H. McCall, of LaPeer, Mich., Secretary.

The first paper in the programme—*My Bifractured Patella—Partial Long Union After Eight Years*, by Dr. Ephriam Cutter, of New York, was passed, the gentleman not being present.

Electricity in Surgery.—Dr. Carl Seiler, of Philadelphia, said that owing to a delay his electric machine had not ar-

rived, and he could not illustrate his subject as fully as he wished.

He believed much could be accomplished by the use of electricity with little pain to the patient. In the use of the galvanic battery, the wire is not painful to the mucous membrane and cuts like a knife. In describing his own battery he said it could be easily regulated by the foot as regards the power of the current. A battery after this plan could be constructed very cheaply by almost any one. He had used his own for the last fourteen months, during which time he had used it four or five times a day, and it could be used for any length of time by dipping from one cell to another. In the common galvano-cautery battery, it was almost impossible to secure regularity in operating. But he had secured a motor power by which he had even removed the epithelium from his own tongue without injury.

Cleft of the Hard Palate, by Dr. Van Deveer, of Albany, N. Y., was passed, the Chairman reading a letter from the Doctor stating that not knowing whether the New York delegation would be admitted he would not attend.

Alcohol as an Anæsthetic Agent, by Dr. J. C. Link, of Terra Haute, was passed, the Chairman stating that the gentleman was not in the city.

Laparotomy.—Dr. Wm. Hill, of Bloomington, Ill., not being present, the Chairman read a paper on *Gastrotomy for the Relief of Intestinal Obstruction due to the Intussusception or Invagination of the Ileum within the Cæcum*. Dr. Hill thought this surgical procedure was not resorted to until he successfully conducted one in 1855. The symptoms leading to the case were caused by the patient eating unripe peaches without proper mastication. Attempts were made to relieve the patient by anodynes, hot fomentations and cathartics, but without avail. On the third day of the attack, he observed a lump about the size of a hen's egg in the right iliac region. The case was diagnosed as one in which the ileum had become invaginated with the cæcum, and that nothing short of surgical interference could offer any hope of relief. Chloroform was administered, an incision five inches in length was made, and the substance found; and on pressing the bowels the substance passed into the cæcum and disappeared.

The edges of the wound were approximated and secured by fur hare lip sutures and with adhesive plaster, a compress and tight fitting bandage completing the primary dressing. The wound united by the first intention, and on the sixth

day the pins were removed. After a slight peritonitis the patient was able to be out of bed on the fourteenth day, and four weeks from the operation the recovery was complete. During twenty-seven years of surgical practice since the operation, many times I have wanted to repeat it in like cases; but on account of strong medical opposition, have not done so and the patients have died. The success of Dr. Wm. A. Byrd, of Quincy, Ill., in operations of this kind and the report of Dr. Edward Bellamy to the *British Medical Journal* leads me to think the results obtained are full of encouragement to surgeons.

Dr. Peck, of Davenport, Ia., thought gastrotomy was a new theory in surgery and was entitled to a good deal of study. He detailed a case which came under his notice. The patient exhibited symptoms of sudden collapse, an opening was made into the abdominal cavity, and about the same state of affairs as detailed in the case of Dr. Hill was found. The treatment was the same, and the patient was likely to recover.

Dr. Halleck, of Kansas City, had had two cases such as detailed by Drs. Hill and Peck, but not with such satisfactory results. He thought there were many cases where the operation of gastrotomy was not advisable, but when it was it should be done early.

Dr. Lee said the difficulty lay in telling when was the proper time. In his mind, the earlier the better.

Dr. Charles Parks said that three troubles arose: First, fear of interfering with the peritoneum; second, difficulty in situating the exact trouble; third, the difficulty in ascertaining the time to make the operation. He cited several cases of injury to the peritoneum, one being of a boy, who, falling from a distance, became fixed on a picket fence, bowels and peritoneum protruding from both the entrance and exit of the point of the picket; result—no rise in temperature or pulse to be noticeable, and no peritonitis following.

Advances in Conservative Surgery of the Joints—By Dr. H. A. Martin, of Boston, Mass., was read; but a paper, *Anchylosis of the Hip*, in the straight position, with report of an illustrative case by Dr. Charles C. F. Gay, surgeon of the Buffalo General Hospital, was read:

Anchylosis may be true or false. True anchylosis may be straight or angular, partial or general; it may be limited to a single joint or involve them all at once. False anchylosis is the rule, and true anchylosis the exception. No period of life is exempt from it. It is sometimes congenital.

In the movable articulations (diarthroses) we have both forms of ankylosis. It is most frequent in hinge joints (ginglemus), and most rare in the ball and socket joints (enarthrodial). Anæsthesia is often necessary in order to differentiate the true and false or fibrous ankylosia.

Questions of risk to life and limb always present themselves when considering the advisability and feasibility of breaking up an ankylosed joint, and the first question that arises has reference to the probability of obtaining such measure of relief of deformity as shall be sufficient to compensate one for the risks taken.

The second question has reference to choice of operations. Select that one which best promises immunity from danger, avoids the maximum of risk and gives greatest guarantee of good results. The innocuousness of violent manipulations of ankylosed joints is most wonderful; yet we cannot ignore the fact that operations upon the larger joints are attended with more or less danger, which is sometimes more imaginary than real.

The statements of W. Mitchell Banks, F. R. C. S., and Dr. Ericksen, relative to the indications for breaking up a joint were quoted, and Dr. Gay in his paper stated that if these statements be literally true, and if we have to acknowledge that modern surgery has no recourse for straight ankylosed limbs, then this class of patients are in a helpless condition. The case I herewith report, illustrates the risks of an operation by fracture, which will assist one in arriving at a correct solution of the question involved. It is a case, the treatment of which, though not carried forward to completion, nevertheless constitutes a contribution of some value to the surgery of ankylosis of the hip. A patient, aged 22, entered the Buffalo General Hospital. He was healthy, unmarried and a farmer, and in 1874 had rheumatism; had three different attacks. One year since he took a few doses of medicine for this ailment, which was followed by convulsions; he became unconscious and remained so three hours, after which he was paralyzed. He gradually regained use of his arms and ankle joint, but the hips and knees became permanently ankylosed with the limbs in straight position so that the axes of the femur and the trunk corresponded. Before any attempt was made to relieve the limbs it was believed that the ankylosis was extra, and not intra-articular. The patient was willing, since he was obliged to maintain the recumbent posture, to undergo any reasonable risk provided encouragement could be given of relief.

Accordingly, after agreement that if, upon trial, it was found impracticable to restore mobility to the joints, the neck of the femur should be fractured with the view of making a false joint, on March 26th the patient was etherized, when it was ascertained that the ankylosis was long and complete. The pelvis was now secured to the operating table, the limb grasped at the great trochanter with both hands, while assistants secured firm hold of the shaft at the femur. It required but little force for a short time applied to fracture the neck of the femur; but whether the fracture was intra or extra-capsular could not be ascertained, nor was it material to know. The capsular ligaments were thought to have been previously destroyed by disease. But little pain followed the operation, and on the second day the patient was comfortable and made no complaint. The limb had been brought up to a right angle with the body, but was left extended for a few days, after which motion was made and practised from time to time. A little later the limb was suspended by means of a cross bar, to which was attached a rope and pulley, the patient being able himself to move his limb in any direction. On May 7th, six weeks after fracture, the patient was again etherized and the opposite limb fractured by the same method at its neck, and, in addition, adhesions of both knees broken up and the limbs flexed beyond a right angle with the thighs. The patient was put to bed with his limbs in a straight position, and an anodyne administered hypodermically as often as it was required. Much pain of the knees was complained of, but there was less inflammatory action than had been anticipated. On the 9th the pulse was 134, temperature, 100; 10th, 109 and 101; 11th, 100 and 99½; 12th, 106 and 94¼. He rallied well from the shock of the operation, and no motion of the limbs was made for a few days. At length, when passive motion was made, he bitterly complained of pain at the knees and required an anodyne, but it was subsequently ascertained that a few drops of water hypodermically injected, had just as soothing an effect as morphine; therefore no more of this drug was given during the subsequent treatment. About the middle of June or six weeks after the last operation, the patient received peremptory orders to return home, and a brother came and took him away against our protest. At this time there was no osseous union, and as he was beginning to set up in bed his prospect was good provided good treatment could have been continued.

This paper was discussed at length by Drs. Hill, Lee,

Prince, Owen and Andrews, of Illinois; Poore, of New York city; McCann, of Pennsylvania, and Ranschoff, of Cincinnati.

Dr. Andrews considered the operation as very important for this trouble. In his experience he had been led to fear the shock which he considered very liable to follow.

Dr. Poore thought there was not the least danger of shock. He had performed over sixty similar operations, and in no case had he noticed that the patient was put in a critical condition. He thought the use of ether oftentimes caused the death of the patient, which was laid to a shock.

Dr. Byrd read the seventh paper prepared by Dr. Joseph H. Warren, of Boston, explaining a new truss to be applied after the radical cure of hernia.

SECOND DAY—*June 7th.*—The Section was called to order by Dr. Wm. Byrd. The attendance was very large and the session, which was devoted largely to discussions as to the treatment and dressings in cases of fractures, was unusually interesting. The Chairman announced that he had received from Dr. Ephriam Cutter, of New York, a paper entitled, *My Bifractured Patella*, together with a plaster paris cast of the knee. On motion it was referred to a sub-committee consisting of Drs. Watson, N. J. Carpenter, of New York, and Peck, of Wisconsin, to examine and report to the Section as to whether the paper should be referred to the publication committee or not. This committee were also empowered during the remainder of the sessions to receive the papers read and determine whether the same shall be referred to the publication committee.

Plastic Splints, by Dr. O. J. Coskery, of Baltimore, and the second one, *Aspirations with Compression in Diseases of the Joints*, by Dr. H. A. Martin, of Boston, were passed owing to the non-attendance of the authors.

The third paper, *Fracture of the Elbow Joint*, by Dr. Stewart, was read by the Chairman, and a sample of a new and ingenious splint for the treatment of this manner of injury was shown. The paper was referred to the sub-committee for examination.

The fourth paper, *Genesis of Bone*, by Dr. Edward Borck, of St. Louis, was passed owing to absence of author.

Ununited Fracture of the Femur Treated by Exercise, by Dr. George W. Nesbitt, of Sycamore, Ill., was read by the author. Non-union of broken bones is so uncommon an event in surgery that it has been estimated that it does not occur

in a larger proportion than one in five hundred, and as fractures of the femur are rare, it follows that a case as above mentioned would happen once in a lifetime. As to the doctor's treatment, it was the use of woollen blanket and plaster of Paris, and compelling the patient to move around without the use of crutch or cane, able to perfect a union in a fracture of nearly eighteen month's standing.

Dr. Keller, of Arkansas, thought the paper an important one, because it showed that the case had not been treated correctly at the right time. He thought any fracture of the long bone should be treated by plaster of Paris dressing rather than splints.

Dr. Carpenter, of Kansas, had used plaster of Paris dressing for fifteen years, and cited several instances in confirmation of the dressing. He thought when properly applied it was the only dressing.

Dr. Sayre, of New York, explained in minute detail his manner of treatment and dressing of simple and compound fractures. He detailed a case in which the patient suffering from comminuted fracture of the humerus had been treated with permanent dressing, and in six weeks, when the mould was removed, the arm was practically well and the union complete. He had within the past six months treated half a dozen fractures and found that it was successful in every case. He always had his plaster bandages prepared and could put one on in a parlor without any litter or dirt.

In answer to a question by Prof. McLean, of Ann Arbor, he said he had no cases of non-union in his own individual practice where he had applied his permanent plaster dressing, and he thought that if the plaster bandages were applied properly union would always be perfect.

Dr. Pruett, Missouri, wished to ascertain if Dr. Sayre used the same dressing in all cases of fracture; if so, how did he prevent shortening in fractures of the femur.

Dr. Sayre said he never confined himself to one class of splints, but he had, in cases of fracture of the leg, obtained good results, no shortening, and had allowed the patient to be out the second day. Dr. Sayre then explained the situation of his patient in bed, the counter extension apparatus to which he was attached, the fractured limb then extended till the fractured ends were in apposition; then with the leg still held in that position the bandage of plaster was applied from instep to above the pelvis, and retained till the bandage had dried; then, as the plaster could not shrink, the plaster would necessarily, according to the anatomy of the leg, retain the full length of the limb.

Dr. McLean, of Ann Arbor, said that an outsider would gain the impression from the remarks that where a non-union occurs the surgeon is responsible for the result. He held that, in some cases, even where the surgeon treated and dressed the fracture correctly, a non-union occurred.

Dr. Sayre explained that the constitution had a deal to do with the union of a fracture, and that he did not mean to say that in all cases the union would result, even if cared for and dressed properly; but in the majority of instances it would.

Drs. Atlee, Philadelphia; Garcelon, Maine; Pratt, Stillwater; Forbes, Iowa; Flanner, Michigan; Keller, Kansas; Wesnolen, Georgia; McClaine, Michigan; Norey, Illinois; Pruet, Missouri, and Freeman, Illinois, took part in the discussion, during which the kind of cloths and the best manner in which to prepare bandages and dress fractures was discussed at length.

Dr. Nesbitt, the author of the paper, closed the discussion by saying that he was pleased that the paper had brought out such a full, exhaustive and interesting discussion.

Elastic Tension in the Management of Cases of Delayed Separation of Ligatures, by Dr. J. R. Weist, was called, and no response being made, was passed.

Lupus Exedens of the Face, by Dr. A. C. Post, New York city, was passed, Dr. Sayre stating that owing to illness Dr. Post did not attend the convention.

The chairman called for volunteer papers, and in response one entitled *Local Joint Extensions*, by Dr. Charles F. Stilman, New Jersey, was handed in to be read by title. Objection was made, the idea being advanced that the paper treated of some surgical instrument which the author of the paper had patented; and it was not the duty of the Section to take any action in the matter. A sharp discussion ensued; and after three or four motions being made at the same time, the paper was laid on the table, one of the members of the Section who objected to the paper being read, saying that perhaps he might be wrong in the matter.

Sub-Peritoneal Surgery, by Dr. W. M. Fuqua, was passed, and a motion was made to adjourn. Dr. McLean, of Ann Arbor, stepped to the platform and asked leave to bring before the Section an interesting case which had been brought to his notice by one of his former pupils, Dr. H. M. Wheeler, Grand Forks, D. T. The Section agreed, and Miss Alice Bundy, residing at Northfield, was conducted to the platform. The lady's left eye and forehead were disfig-

ured by an aneurism of the orbital blood-vessels about the size of a hen's egg. Dr. McLean, said that the lady was twenty years old, perfectly healthy, and that the sight of her eyes was not impaired; that the tumor commenced with a simple birth-mark over the eyebrow, and had grown gradually, but more rapidly of late, to its present size; that it was a common pulsating tumor involving the eyebrow, scalp and orbital organs, but did not involve any absorption of the bone. The operation had been performed on the patient six years ago, but without success. He thought, from the partial examination he had made, that, if the common carotid artery was tied, the tumor could be removed without serious results. He asked that the members examine the tumor and make such suggestions as they thought proper.

After an examination by a number of those present, the lady withdrew, and a short discussion followed.

Drs. Moore, Rochester, N. Y., and Pruett, Missouri, were not in favor of the ligature of the artery. Both gentlemen thought that by tying the direct arteries supplying the tumor it could be removed without danger. Drs. Byrd and Halleck advised the removal of the galvano-cautery. The case was further discussed by Drs. McLean and Lee, and while this was going on a motion to adjourn was made and carried.

THIRD DAY—June 9th.—Excisions of the Intestinal Canal when Covered with Peritoneum, by Dr. William A. Byrd, of Quincy, Ill., was read in the general session in the forenoon, and was accordingly passed by the Section.

The next two papers—*Fatal Influence of Anæsthetics in Diseases of the Kidneys*, by Dr. N. Turnbull, Philadelphia, and *Osteotomy and Exhibition of Instruments*, by Dr. C. T. Poore, of New York, were not read, the first named gentleman not being present, and the second not being prepared.

Contributions to Surgery of the Liver.—Dr. Jos. Ranschoff, of Cincinnati, reported a case of the removal of five gall stones that had been diagnosed and removed by Sims' operation. The second case was that of an abscess of the liver from which one gallon of pus had been removed by a new method without the loss of a drop of blood. The patient made an excellent recovery.

Dr. Edmund Andrews, of Chicago, presented the next paper, entitled, *The Proper Points for Incision in the Drainage of Suppurating Knee Joints*. Referred to the sub-committee on publication for examination.

The Section then turned its attention to the papers read

at the general session in the forenoon by Dr. Byrd, *Excisions of the Intestinal Canal*. Dr. Ranschoff, Cincinnati, thought the paper was not a practical one, but was interesting and well read. Dr. Pruett, of Missouri, had not quite understood, by the title of the paper, what its contents would be, but had been edified thereby, and, in general, agreed with it. Dr. Byrd further elucidated some of the points mentioned in his essay. Dr. Garcelon, of Maine, made some objections to the "artificial anus," which was described in the paper, and gave his ideas on the cure of strangulated hernia. Dr. Ellis, of Michigan, gave the case of one of his patients, who had been apparently "spontaneously cured," as the surgical slang goes. Dr. Vaughn, of Missouri, said three months was the longest period in his experience in which the artificial anus referred to above had remained open. Dr. Norris, of Illinois, spoke of one of his peculiar cases. Dr. Markham, of Iowa, described a case in which an artificial anus had formed from a gunshot wound, described his treatment, and asked if any surgeon present could give a better mode of treatment than the one he had employed. Dr. Allen, of Pennsylvania, said that although nature occasionally worked cures, yet he would recommend the use of surgery as far more certain. Dr. Moore, of New York, entered "a little remonstrance," as the venerable gentleman, with a genial smile, to the recommendations of the paper, said he still stuck to the old school of surgery and its practice.

The discussion then turned upon Dr. Ranschoff's paper, *Surgery of the Liver*. Dr. Keller, of Arkansas, said, in gunshot wounds of the liver his patients had invariably died, and asked if any surgeon could detail a successful diagnosis. Dr. Pruett, of Missouri, asked a question in regard to the abscess referred to in Dr. Ranschoff's paper, and was answered by the latter.

Dr. Green, of New York, made an explanation that Dr. Sayre, in his statement in regard to Dr. Stillman's paper, which was laid on the table yesterday, had acknowledged that he was in error, and had asked Dr. Green to come to the Section, because he (Dr. Sayre), would necessarily be absent, and make the *amende honorable*.

Dr. Carpenter, of Chicago, moved that all the criticisms and strictures upon Dr. Stillman's paper and instruments be stricken from the minutes of yesterday's meeting. A discussion on the motion followed. The discussion and motion were both arbitrarily dropped, with the idea that perhaps the subject might come up in the general session today. The Section then adjourned until next year.

SECTION ON OBSTETRICS.

FIRST DAY—*June 6th.*—Dr. H. O. Marcy, of Boston, Chairman.

Forceps and their Application—New Instrument—Dr. Beverly Cole, of San Francisco, said he was a follower of the old school of obstetricians, and was not yet a convert to the new school, as represented by Playfair and others, who teach that the forceps must in all cases, whether at the *superior* strait or lower, be applied with reference to the axis of these straits, utterly ignoring the importance of the child's head. Dr. Cole recognized the *practicability* and necessity of applying the instrument to the sides of the child's head.

It was in this mode of applying the forceps only that we could be assured against having them slip. The instrument exhibited differed materially from any other extant; whilst exceedingly simple, it fulfilled the indications more completely than any other. The fenestrum of each blade is large at the heel, like the Hodge forceps, in which there is an advantage, since the amount of scalp tissue protruding is so great as to fix the blade and absolutely prevent its riding on the parietal face, which Elliott's and others, with a conical-shaped fenestrum, always will do. The shank of this instrument is very much curved, so as to facilitate its application at the superior strait without pressing upon the perineum, which the straight shank will do, thus sparing the woman much unnecessary suffering, and aiding the operator greatly. To this curve he applies the term *perineal curve*. The entire instrument weighs but fourteen ounces.

He next criticised Dr. Tarnier's views and instrument, pointing out the defects in his teachings and the faults of his forceps. It is too clumsy, weighs too much, is difficult of application, too complicated in construction, and will slip when applied, as it usually is, namely, so as not to injure the child. Therefore, to avoid slipping, the child is exposed to too much pressure, endangering its life. But, as Budin and Tarnier, and their followers abroad and at home, believe, there has been a great advance made through this forceps. Dr. Cole has made an attachment to his forceps which fully carries out Tarnier's idea. This attachment is exceedingly simple, and is so arranged that by touching a spring it is fixed to the shank of the forceps, and by depressing the ratchet, it is as easily detached. Thus the whole instrument is a *multum in parvo*, furnishing two in one.

Whilst Dr. Cole utterly fails to appreciate the importance, or even the admissibility of the attachment converting it into a Tarnier forceps, nevertheless, he has very ingeniously arranged this attachment so as to adapt it to the use of the converts to Tarnier.

In the discussion which followed, Dr. Battey, of Georgia, and others, endorsed the views of Dr. Cole as to the principles concerned in the application, and expressed themselves as highly pleased with the forceps exhibited, believing that they completely fulfilled the indications pointed out.

Mechanical Treatment of Delivery from the Superior Strait—Modes of Application of the Force Applied—Modified form of Forceps.—Dr. Wm. H. Granger, of East Boston, Mass., read a paper on this subject. The form of forceps introduced was a modification of Elliott's forceps, consisting of an extra handle attached upon the anterior surface just above the usual handles, and by means of which pressure could be made in the posterior direction, thus enabling the accoucheur to make traction in the axis of the superior strait.

Dr. Nelson, of Chicago, regarded it important to relieve the bladder as much as possible from pressure, and, at the same time, to make careful traction in the axis of the strait. He thought Dr. Granger's instrument would be less likely to give rise to vesico-vaginal fistula than the ordinary forceps.

Dr. G——, of Washington, thought the principle good, but that it could be applied as well without as with the attachment.

Dr. Stabler, of Minnesota, wished to know if by adopting this method too much pressure would not be made upon the sacral nerves.

Dr. Granger said that injury came not so much from brief, severe pressure as from long continued pressure upon the nerves and other tissues.

Dr. Dunster, of Ann Arbor, regarded it as very important that every movement should be accurately in the direction of the axis of the straits, and regarded the modification of the forceps as a useful one. The accidents and injuries sometimes occurring in connection with parturition, such as the formation of fistulæ of various kinds, were not, as a rule, so much due to the use of instruments as to prolonged pressure from the head of the child. Rupture of the perineum was caused, not so much by forceps as by attempts to force the head through the passages before proper dilatation had occurred.

Dr. Nesbitt, of Sycamore, Illinois, believed that the pro-

fession was too well educated to make traction in the indirect direction; and that knowing in what direction traction should be made, the attachment was of no special assistance.

Dr. W. C. Burke, Jr., of South Norwalk, Conn., saw a case only a few days ago in which the perineum was ruptured by an instrumental delivery made by an intelligent physician.

Dr. Morris, of Ironton, Ohio, thought the perineum might be ruptured with or without forceps, and no one would be to blame.

SECOND DAY—June 7th.—Subinvolution of the Uterus, its Causes, Effects and Treatment.—Dr. D. T. Nelson, of Chicago, attributed many uterine and often general disturbances to incomplete involution through the entire puerperal period; the uterus should be daily examined digitally. He recommended the use by injection of warm water, containing carbolic acid, one-half to one per cent., and the internal use of quinine, both of which favored the occurrence of involution. No parturient woman should leave the bed until involution is complete.

Dr. K. S. Elliis, of Michigan, asked for experience in operating on lacerations immediately after delivery. The general sentiment seemed to be in favor of the immediate operation in the majority of cases, especially if the circular artery or any of its branches are involved.

Drs. Chapman, of New York; Prince, of Illinois, and Campbell, of Georgia, recommended the daily use of quinine for a week after confinement, especially in malarial districts.

Dr. L. H. Robbins, of Lincoln, Neb., reported a *case of Delivery of a Child* weighing seventeen and one-half pounds, and was well formed.

Progress in Oophorectomy.—Dr. Robert Battey said that Lawson Tait, Spencer Wells, and English and German surgeons were rapidly increasing the number of operations. In deciding whether or not it should be adopted, each case must be studied by itself. As a rule, he would prefer to remove the ovaries through the abdominal rather than the vaginal incision. He referred to several eminent operators who have ceased to employ Listerism.

Dr. Cole, of San Francisco, regarded Listerism as dead and a fallacy. The discussion that occurred at the International Congress in London, 1881, was reviewed at some length; and the position taken that Mr. Lister admitted every

allegation against the method known by his name. Dr. Cole was not an opponent to antiseptic surgery, but did not believe that any man could say that one wound was septic and another aseptic. All good surgery was antiseptic, because *cleanliness* was at its foundation. He doubted the existence of any germicide which could be used of sufficient strength to kill the germs and yet be safe for the patient.

Dr. Prince, of Illinois, did not receive the same impression from the discussion at the International Congress as did Dr. Cole. He did not believe that any man could cultivate germs in a solution of carbolic acid of the strength of one thousand per cent., while water, which had been boiled, and which Dr. Cole recommended, would not destroy them. The brilliant success sometimes obtained without the use of any antiseptic measures whatever, did not in any way explain the remaining cases where antiseptics have been so beneficial.

Dr. Cole continued by reading extensively from Mr. Lister's remarks in support of the position he held concerning the method of dressing.

The Chairman defended Listerism. He knew Mr. Lister to be right in certain directions and believed that Dr. Cole was correct in others. He defined an aseptic wound as a simple fracture and a septic wound as a compound fracture; that is, in a septic wound there is something from *without* which enters and changes its character.

THIRD DAY—*June 8th.*—*An Elastic Serrated Uterine Scoop and Curette*, devised by Dr. Jos. H. Warren, of Boston, was exhibited. It was designed to be used in the removal of uterine tumors.

Dr. Prince, of Jacksonville, Ill., exhibited an instrument by means of which *the sewing-machine stitch* could be made, and regarded it as especially adapted to operations for recto- and vesico-vaginal fistulæ.

Ovariectomy During Peritonitis—Is it Justifiable?—Dr. Dunster believed that the operation should unhesitatingly be performed in the following classes of cases: First. Peritonitis resulting from rupture of a cyst, with discharge of its contents into the peritoneal cavity. Second. Peritonitis following tapping or aspiration. Third. Peritonitis with marked effusion. The doubtful cases belong to that class in which there was a low grade of irritative inflammation incident to the presence of the tumor.

Dr. Battey and Dr. Jenks, referred to cases which had been operated upon while peritonitis was present, and recovery took place.

A paper on *Impacted Retroversion of the Uterus* was read by Dr. H. F. Campbell. Special attention was directed to the assistance offered by placing the patient in the genu-pectoral position while replacing the organ.

In this connection a paper by Dr. W. W. Potter, of Buffalo, N. Y., on the *Gynecic Value of the Genu-Pectoral Position*, was read and the two gave rise to discussion.

Dr. H. L. Gertz, of Marshalltown, Ill., read a paper entitled *A few Practical Points on Ruptured Perineum*. The points were that all cases can be treated successfully—except where the sphincter is involved—by position and without sutures. Movements from the bowels should be secured before placing the patient in position, and after that no passage should be allowed for four or five days. Keep the wound clean and keep away from it every foreign body.

Dr. Gertz also exhibited a *Uterine Repositor*. It consisted of a flexible bougie into which was introduced a steel stylet with a disc on the end. The method of use was to introduce the largest bougie the uterine canal would admit, allow it to remain a few minutes, remove it, and introduce another, and then the stylet was used, pushed on until resistance was encountered, then pushed carefully, and finally it would go into the entire length of the canal, where it may be allowed to remain a few minutes and then removed.

Dr. H. F. Campbell thought the method obviated the danger arising from the use of the stem-pessary, a straight, stiff, or slightly curved stem, which was liable to wound the mucous membrane of the delicate organ and at once establish traumatism.

SECTION ON STATE MEDICINE.

FIRST DAY—*June 6th.*—Dr. A. L. Gihon, U. S. Navy, Chairman.

The Section proceeded at once to discuss the resolution referred to them by the Association. The resolution was forwarded by the Indiana State Medical Association, praying the American Association to petition Congress to empower the National Board of Health to supervise the supplying of vaccine virus. Nearly all present took strong grounds against this resolution being reported on favorably. All felt the need of having the matter regulated by some power, but preferred that the State and Local Boards have full control of the matter rather than the National Government. Among those opposing the resolution were Drs.

Ames, Massachusetts, Stevens, Indiana, Sears, Texas, Williams, Pittsburg, Pa.

Dr. John G. Lee, Philadelphia, read an essay on *Suicide in the City and County of Philadelphia During the Past Decade*. This was a carefully-prepared mass of statistics, so arranged as to be very interesting. Some of the peculiarities noted were as follows:

More married men than single commit suicide. More single women than married put themselves to death. Men choose the more violent means, such as shooting, cutting throats and hanging. Women choose poisons and narcotics. Suicides are generally committed in some part of the house; very rarely are they out-doors, except in case of drowning. They occur more frequently in times of low barometer pressure, and after pay day among the working classes. They occur with greater frequency among those in straits and hard circumstances. Suicides are more frequent among Americans and scarcest among Irish people. The favorite methods are as follows: Irish—hanging or drowning. English—shooting or cutting throat. American—shooting or hanging. German—shooting and drowning. The speaker advanced many theories to account for the fact of suicide.

SECOND DAY—June 7th.—Expert Testimony.—All the doctors present thought some other means should be taken to secure reliable experts than the present mode.

Dr. Hughes, of St. Louis, reported the following resolution to be laid before the American Medical Association, which was adopted:

Resolved, That we deem it advisable and more conducive to the ends of justice, where medical men are summoned as experts, that they be so summoned by the court and not, as now, by the counsel on either side.

The chairman called attention to the fact that a National Museum of Hygiene had been established in Washington by Congress, whose managers desired and should have the support of all physicians. It was voted to call the attention of the Association to the matter.

THIRD DAY—June 8th.—Temperance Resolutions.—The following resolutions, presented at the general session on Tuesday, by the Women's Christian Temperance Union, were referred to this Section and taken under consideration at this meeting:

Whereas, Alcoholic intemperance is a prolific cause of dis-

ease, and prevention through the education of the people is one of the most powerful antidotes,

Resolved, That we approve teaching the children and youth in the schools and educational institutions in this country, as facts of hygiene, the physiological dangers and evils resulting from the use of alcoholic beverages, and

Whereas, It is the acknowledged duty of the State to provide for such education of the people as is essential to good citizenship,

Resolved, That we recommend the State Legislature to enact laws requiring the physiological dangers and evils resulting from the use of alcoholic beverages taught in all schools supported by public money or under State control.

Mrs. Mary H. Hunt appeared and eloquently urged the adoption of the resolutions.

Dr. Foster, of Maine, said he had abolished the use of alcohol in his practice. He had had charge of a city hospital three years and a county jail twenty-one, and during that time averaged two cases per week of delirium tremens. He treated them without alcohol and never lost a case.

After debate, participated in by Dr. Hughes, of St. Louis, Dr. Hewitt, of Red Wing, and Dr. Gihon, of the Navy, it was voted to reaffirm the resolution of the Associations adopted in Buffalo in 1878. They were as follows:

Resolved, That in view of the alarming prevalence and ill effects of intemperance, with which none are so familiar as members of the medical profession, and which have called forth from eminent practitioners the voice of warning to the people of Great Britain concerning the use of alcoholic beverages, we, the undersigned, members of the medical profession of the United States, unite in the declaration that we believe alcohol should be classed with other powerful drugs, that when prescribed it should be done with conscientious caution and a sense of great responsibility.

Resolved, That we are of the opinion that the use of alcoholic liquors as a beverage is productive of a large amount of physical and mental disease; that it entails diseased appetites and enfeebled constitutions upon offspring, and that it is the cause of a large percentage of the crime and pauperism of our cities and country;

Resolved, That we would welcome any change in public sentiment that would confine the use of intoxicating liquor to the uses of science, art and medicine.

Medico-Legal Treatment of Insane.—Dr. C. H. Hughes, of St. Louis, read a paper on this subject, observing that the age

is pre-eminent for the observance of human rights. The structure of our government is founded on the dogma of human rights. It is the vital principle of our republic. It is the duty of the physician to speak for the rights of the insane. Physicians were the first to recognize these rights, the first to free them from the dungeons in which they were inured, the first to disabuse the popular mind of the prejudice against the insane. The State has made ample provision for this class of unfortunates; so princely have been the provisions that by some they have been called extravagant. Physicians need not fear to speak. Insane people have the following rights:

1st. A right to a medical inquiry, by medical men and by medical methods into the character of his disease. He should have a careful diagnosis from competent men accustomed to such inquiry.

2nd. The right to judicial rulings on their behalf when put on trial, in accordance with medical science and not according to the judicial conception of insanity.

3rd. The insane should be protected from themselves and the consequences of their malady, and the State must provide for them asylums. The insane should be prohibited from marriage for the sake of the unborn. Better not be born at all than be born insane. The State should annul all marriages with the insane so far as is consistent with public morals and the sacred marriage tie.

The Section, after providing another resolution in regard to expert testimony, adjourned.

SECTION ON DISEASES OF CHILDREN.

FIRST DAY—*June 6th.*—No meeting; only five present.

SECOND DAY—*June 7th.*—Dr. Lee, of Baltimore, Acting Chairman; Dr. Miller, of Rockwell, Ia., Acting Secretary. Session well attended.

Causes of Serious Diarrhœa and Cholera Morbus in Infancy and Childhood, and the Best Means of Lessening the Mortality from those Affections.—Dr. N. S. Davis said that nearly all the public sanitary and hygienic measures of the present day are aimed at the removal or prevention of the disease, both predisposing and exciting. The problem presented for consideration, however, is how best to shield the human system from their injurious effects. Nearly all the recent writers on diseases of children class the cases of serious diarrhœa and

cholera morbus in children under two years of age, usually called summer complaint and cholera infantum, with local inflammations under the general name of catarrhal gastro-enteritis; and while they all assert that these forms of disease are most prevalent and fatal during the warmest months of summer, they set forth as the chief causes, improper feeding, impure and changed milk, impure air, the process of dentition or teething, and overworked, badly fed and unhealthy mothers.

These causes are represented to produce gastric or intestinal indigestion, both of which so increase the irritation of the mucous membranes as to cause a more or less rapid serous exudation into the gastro-intestinal canal. Indigestion is generally regarded as the cause of catarrhal irritation, while the cause is the result of bad feeding, impure air, teething and unhealthy mothers. Bad milk is also alleged to be another cause. Bad milk and food are prevalent in all communities during the winter as well as summer. Children cut their teeth in December as in July, and unhealthy mothers exist during one part of the year as well as another. If any of these causes produce infantile cholera they would be frequent in all seasons. The records show that the prevalence of all grades of these two forms of disease are restricted almost entirely to the time between the last week in June and the last in September. In Chicago in 1872 the reports of the Board of Health show 8 deaths in April, 6 in May, 23 in June, 246 in July, 163 in August, 69 in September, 13 in October, and 2 during the rest of the year. Other years show the same results, and in all northern and eastern cities the ratio is the same. The diseases prevail little in cities so located that there is only a short range of temperature between the warmest days of summer and the coldest of winter, and where the sea breezes and other causes make the summer nights cool. The milk distributed in San Francisco and New Orleans is the same as that in Boston and Chicago, and the nursing mothers are no more free from mental and physical infirmities. An examination of the statistics of these several cities shows a ratio of only about five deaths from cholera infantum annually for every 10,000 inhabitants in San Francisco, seven in New Orleans, twenty-five in Boston and thirty in Chicago. There must therefore be some efficient cause not common in all large cities. A record of the disease and coincident meteorological conditions of atmosphere were commenced some years ago, and for three years records were kept in Cairo, Davenport and Omaha.

The reports of these records were given in this Association and published some years ago, and showed :

First—That the prevalence of the affections under consideration is limited principally to July, August and September, commencing with the first wave of high atmospheric heat that continues days and nights for more than five days, which in the latitude of Chicago is sometimes the last week of June, but more frequently the first week in July, and continues more or less during the succeeding ninety days.

Second—That while the deaths from these affections in any city or given community will be nearly the same in the two first months after they begin (in July and August), the date of the initial symptoms or beginning of the disease in three-fourths of all the cases will be in July, very few originating after the first of August. Many cases commencing in July continue until the months of August or September, causing wasting and death.

Third—That it is not simply high or extreme heat of temporary duration, such as that of a single day or any number of days, with cool nights, which favors the development of the disease, but continuous high temperature, day and night, for several days ; and if, in addition to the heat, the air be stagnant from lack of winds or obstructions, as in large cities, or from defective ventilation, the effect is greatly increased. This explains why these affections are more numerous and fatal in cities than in rural districts, and why they prevail so little in even large cities located in warm climates, provided the location be such as to afford cool breezes at night.

Fourth—That while the great majority of attacks which occur in any given summer are found to have their beginning in July, or during the first thirty or forty days after the first wave of protracted high temperature for the season, they are not equally distributed over the whole of the month.

Having thus traced the origin of that part of infantile mortality caused by this disease, let us inquire for a moment how this combination of circumstances can affect the living human body. We have the physical law that the higher the temperature of the air the rarer it becomes and the less oxygen is contained in it. A person breathing at a high temperature would receive less oxygen than at a lower temperature. Stagnant air becomes more rapidly exhausted than moving, and the physical law of expansion by increase applies to the living as well as to dead matter ; consequently high temperature acting on the living body tends to increase the distance of the atoms from each other, and thereby les-

sen the force of vital affinity, while it increases the excitability or susceptibility to impression. The capacity of the blood for taking up oxygen or holding it in suspension, depends much upon the proportion of saline elements it contains, and under a continuous high temperature the increase of cutaneous exhalation rapidly diminishes the free salts of the blood and lessens the capacity to receive the oxygen from the air cells of the lungs in exchange for its carbonic acid gas. Colitis and recto-colitis or dysentery seldom occur until late in the season, when warm days are followed by cool nights and frequent changes from wet to cold occur, and even the indigestion which has been so generally suggested as a cause of summer complaint, is itself the result of the impairment of natural gastric and intestinal secretions, and the increase of more serious exudation—the primary fault not being so much in the quality of food as in the morbidly sensitive and relaxed condition of the whole inner surface of the digestive canal. The children are affected more than older persons because of the less mature development and greater sensitiveness of their gastric and intestinal mucous membranes and glandular structures, and their much more constant confinement indoors. If this is correct, it indicates clearly that our efforts to lessen infant mortality from these diseases must embrace such measures as will secure for young children a better supply of fresh, pure air, for increasing the oxygenation and decarbonization of the blood and maintaining the activity of the vaso-motor nervous system, and as well counteracting the effects of high temperature by increasing the general tonicity and lessening the excitability of the tissues generally. Measures for the first object must consist in securing better ventilation of dwellings, and especially nurseries and sleeping rooms during the warmest part of the summer, the sending of young children with their mothers and nurses from densely populated districts to moderately elevated, healthy locations, or to floating hospitals, receiving ships or large bodies of water during the special period of high heat. For accomplishing the second purpose, I know of no measures that are so efficient, and at the same time within the reach of the poorest part of the population, as the judicious use of the sponge bath. Whenever the human system is relaxed and rendered morbidly sensitive by continuous high heat, causing the infant to be languid, restless, and sometimes pale, a free bathing or sponging of the whole surface with water simply as cool as is comfortable, always produces a refreshing and invigorating influence,

which continues from six to twelve hours. Consequently, if mothers and nurses could be so instructed by their family physician that during every wave or period of high atmospheric temperature in which the mercury did not fall below 70 during the nights, each child under twelve years of age should be regularly given a full sponge bath in the evening, as well as in the morning, and their sleeping rooms should be as well ventilated as possible. Such a course would diminish the attacks of serous diarrhœa and cholera infantum one-half, and consequently very greatly lessen the infant mortality from these affections.

It is well known that a large majority of all the attacks of this form of disease show their first beginning during the last half of the night, or early in the morning, owing to the long continuance of the high temperatures, coupled with the more still and confined air of the night. The increased tone of the whole vascular system produced by the stimulant and tonic effect of a comfortably cool sponge bath on the function of the vaso-motor nerves, applied in the evening, would enable thousands of these little, restless sufferers to pass the whole night unharmed, when without it the dread weakness would begin. The views I have presented in regard to the causes and nature of the affections called summer complaint and cholera infantum also afford clear indications for the most rational and successful explanation of remedial agents in the treatment of those affections in all their grades of activity.

The subject was spoken on by Dr. Lee, who recommended bandaging the stomach and belts in practice and the application of paper to the discharge to ascertain the acid state of it and determine the entire matter.

Dr. Lee read a few observations on *Rickets*, six cases having been under treatment in the dispensary at Baltimore. The disease is spreading on this side of the Atlantic and growing in numbers—the symptoms being enlargement of abdomen and retardation of the dentition, deformities of the thorax and enlargement of the joints.

Dr. Earl, of Chicago, has an average of a case once in three weeks. Food in bad condition is alleged to be the cause of rickets.

THIRD DAY—*June 8th.*—No quorum. General conversation on measles and headaches in children. After this, the Section adjourned.

SECTION ON EYE, EAR AND THROAT DISEASES.

FIRST DAY—*June 6th.*—Dr. Jones, of Chicago, Chairman; Dr. Carl Seiler, of Philadelphia, Secretary.

Recurrent Pharyngeal Hæmorrhage.—Dr. Wm. Porter, of St. Louis, read a paper on this subject which consisted mainly of the history of two cases which had come under his notice, in which the bleeding seemed to come from the lungs, with local evidences of pulmonary disease to sustain the verdict; but in neither was this really true, the bleeding coming entirely from the tonsular artery, the lungs not being in the least affected. A great amount of ulceration in the larynx is not necessary in order that hæmorrhage be induced, and this bleeding may occur repeatedly and under such circumstances as to simulate hæmoptysis.

An "experience meeting," as the President aptly called it, was held, the gentlemen present not confining themselves to any special subject, but giving brief histories of certain important cases which had come under their notice and particular modes of treatment. The subject that was most particularly noticed was the use of warm water in the earlier stages of eye and throat diseases, the general opinion being that applications of water as hot as the patient could stand it was most beneficial and produced the most satisfactory results.

SECOND DAY—*June 7th.*—A communication was received from Dr. B. Joy Jeffries, relative to action by the Association on the approval of the petition to Congress for calling an international commission to consider and agree upon standard methods of testing visual acuteness and color blindness, and standard requirements of these necessary qualifications in the navies and merchant marines. Referred to a committee of three.

Dr. Calhoun, of Atlanta, Ga., in the absence of a paper which he had prepared on the subject, gave a brief outline of a peculiar case which had recently come under his observation, viz.: *Vaccination on the Eye*. This was caused by the virus being in some unknown way communicated from the arm to other parts of the body, including the left eye, the pustule taking the usual course that it does on the arm, the result being the destruction of that member.

Dr. Connor and Dr. C. R. Agnew, of New York, also gave brief histories of special cases, the latter gentleman

speaking particularly of the communicableness of eye diseases in residential schools, illustrated by a case near New York city.

Two or three gentlemen exhibited and explained peculiar instruments which they had found of especial service, and, nothing further of importance being brought up, the Section adjourned for the day.

THIRD DAY—*June 8th.*—"Cases of Deafness following Diphtheria," etc., by Dr. L. Turnbull, of Philadelphia. The author not being in attendance, the paper was referred to the Committee on Publication.

Dr. Carl Seiler gave his experience in the *Treatment of a Fibroid Tumor in the Nasal Cavity*, the case having transpired in Philadelphia. The tumor was hard and large and confined to the right nostril. It was confined to the roof of the nose and in nature was fibrous. He found that the posterior portion was composed of fibrous tissue, subject to cartilaginous change. He removed the tumor and intended to cauterize it upon his return home.

Dr. E. H. Hazen, of Davenport, related instances of chronic catarrh trouble. He deprecated the use of lead and thought that a preparation of starch, glycerine, copper and morphia, which had been most efficacious in his treatment, was superior.

Dr. Young thought that sulphate of copper, understandingly applied, was successful in affording relief.

Dr. Smart of Michigan, related a case of catarrh of the eye where hot water injections resulted in marked success.

Dr. Johnson, of Peoria, said too many applications tended to aggravate the disease. He was in favor of mild treatment and very little handling of the eye. In a mild form he had successfully treated with glycerine and tannin. The solution was pungent at first, but the congestion was soon relieved. In chronic cases he had treated with boracic acid, camphor and tincture of iodine; also a solution of bichloride of mercury with wine of opium. A lotion of tannin, glycerine and salt with hot water, introduced with a pipe, had proved very successful.

Dr. Connor, of Detroit, stated that he considered a grievous wrong was done where physicians of regular standing failed to inform residents of their neighborhoods concerning the common sanitary nature and treatment of eye diseases. This was a field that had been too little cultivated.

Dr. T. J. Jones, of Chicago, spoke in favor of instructing

the public with regard to infectious ophthalmia. Discharges of the eye were so common that little heed was paid to the dangers of contagion. People often fell into the hands of quacks and suffered irredeemable loss and injury for want of a little sensible and wholesome instruction concerning simple forms of treatment.

Dr. Johnson felt certain that many people lost their sight for want of the simple knowledge of hygiene.

Dr. Dyer was profoundly impressed with the necessity of bringing the matter directly before the people, thousands of whom suffered yearly when a little forethought or knowledge would have saved them.

Dr. Connor thought that knowledge on the subject should be taught the public as man to man, leaving aside personal benefit. He spoke in favor of inaugurating a system for sanitary instruction and alluded to the system in vogue in Michigan. By interesting the public, people would learn to know that it required knowledge to make a doctor, and an inestimable benefit would be conferred upon humanity. The people should have some proper notion of what constituted a doctor. The object of the science of medicine was to give health, and the more extended the general information the better.

Dr. Holcomb, of New York, spoke of microscopical experiments made with the pus of inflamed eyes, illustrating his remarks by referring to several very interesting expositions of experiments.

Dr. Dyer moved the appointment of a committee of three to prepare some method by which the common dangers resulting from diseases of the eye should be made generally known to the public at large. Carried. Drs. Dyer, Connor and Jones, of Chicago, were appointed as such a committee.

Adjourned *sine die*.

SECTION ON DENTISTRY.

FIRST DAY—*June 6th*.—Dr. D. H. Goodwillie, of New York, Chairman; Dr. Truman W. Brophy, of Chicago, Secretary.

Oral Hygiene.—Dr. Wm. D. Kempton, of Cincinnati, read a paper on this subject. He said that from the beginning the sole aim of practitioners was to discover a cure for disease, and although sometimes harmful, the medication received the credit. Now one of the main objects of practitioners is to prevent disease. The profession is indebted to

specialists for many, if not most, of these discoveries; as they are more apt to arrive at definite results than those whose attention is occupied with the whole field of medicine. To be successful in the fullest sense of the term, the discoveries of these specialists must be received heartily by the profession at large.

Dr. Kempton then entered into a careful analysis of the teeth, giving their elements and functions, and the acid theory of decay by Dr. George Watt, with the factor that modifies the action of acids, viz., vitality. Then followed a list of the evils resulting from diseased teeth, showing that the whole system is more or less affected and deranged, many of the cases of headache, earache, affections of the eye, and rebellion of the stomach to perform the duties imposed upon it being traceable oftentimes to badly decayed teeth.

Dr. Kempton's paper closed with directions for preventing decay in teeth, prefacing with the remark that those teeth in which decay had already set in should be either extracted or filled. Physicians should point out to their patients the results of neglect of the teeth, and no medical school should consider its curriculum complete unless some attention is paid to the teeth.

The paper was discussed at length by Drs. Williams, Talbot, Allport, Lawrence, Marshall, Goodwillie, Ellmer, Reed and others, during which the subject of phosphates in food was introduced. The enamel of the teeth is composed mainly of phosphate of lime, and Dr. Allport was very earnest when he made the remark that our food should be taken as nearly as possible in the condition in which God prepared it. He referred especially to wheat, asserting that the so-called patent process of making flour eradicated much of the phosphate in the wheat, the result being that not enough of this was left to keep the teeth strong and healthy. He did not advocate the use of phosphates alone, but he did protest against food which had not enough of them to keep the system and teeth in perfect order. Dr. Lawrence antagonized the stress placed upon this subject, alleging that other elements were as necessary as phosphates.

SECOND DAY—June 7th.—Dr. W. C. Barrett, of New York, briefly sketched a case which had come under his observation, and which he illustrated by plaster casts, showing the persistence of heredity in dental development.

Need of Dental Surgeons in the Army and Navy.—Dr. J. S. Marshall, of Syracuse, N. Y., read a most interesting paper

on this subject. He began by stating that the Government provides for the care of a soldier in all cases except where his teeth are concerned. Soldiers on the frontier and sailors on a long cruise have no opportunity of receiving dental services, no matter how much they may need such attention, and the disease must run its course, being turned over to the bungling of the hospital steward or some less competent person. The treatment of fractures or gunshot injuries of the lower jaw is the same as twenty-five or thirty years ago, being much behind the times. The interdental splint, invented by Dr. J. B. Bean, of Georgia, during the civil war, and improved by Dr. Norman Kingsley, of New York, is a very great improvement in the treatment of these cases, and is endorsed by the best surgeons the world over. The success with this splint has been remarkable. The objection to the appointment of dental surgeons in the Army and Navy is that the amount of dental diseases is so small as not to require specially educated surgeons to treat them. Dr. Marshall then gave some statistics showing the relative number of men in the Army and Navy who in the years 1878 and 1879 were reported as having needed dental services; also the opinions of Surgeons General of the Army and Navy, Gen. Hancock and Admiral Porter relative to the appointment of such surgeons. To petition Congress for action is useless without the heads of medical departments see the need and make the recommendation. The paper closed with a recommendation that a committee be appointed by this Section to arrange a blank statistical report covering all the dental and oral diseases, and request the Surgeons General of the Army and Navy to incorporate them in the regular medical and surgical reports.

A lively discussion followed on the subject of the paper, which resulted in the offering of a resolution by Dr. Allport that a committee of three be appointed by the Section, who, in connection with Dr. Maynard, of Washington city, and the Surgeons General of the Army and Navy, should make what efforts they deemed advisable regarding the appointment of dental and oral surgeons in the Army and Navy, and to report to the Association next year. This motion was adopted, and Drs. Allport, Marshall and Williams were appointed such committee.

Dr. Lawrence, of New York city, presented a resolution calling for the appointment of a committee to consider the subject of food, including mastication, insalivation, digestion and assimilation in its relation to the development of the

different tissues and organs of the body. This resolution also prevailed, the chairman postponing for the time being the appointment of the committee.

Invitations were received from the dental associations of Minneapolis and Stillwater to visit those cities, which were accepted and the times for such visits agreed upon.

The Section then adjourned for the day, many of the members, however, remaining to hear another paper by Dr. Marshall on the same general subject of the previous one presented by him.

THIRD DAY—June 8th.—By action of the Association the name by which the Section is known was changed to the department of Dental and Oral Surgery, and as such it will hereafter be known.

The President appointed the committee called for in the resolution of Dr. Lawrence, of New York, presented and adopted the day before. The committee are Drs. Lawrence, Talbot and Kempton.

The Injurious Effects of Mercury as Used in Dentistry, was read by Dr. Eugene S. Talbot, of Chicago, the subject as treated being specially confined to the use of amalgam fillings in natural teeth. There can no longer be doubt that amalgam fillings in teeth will sooner or later produce mercurial poisoning. The dire effects of this metal are not always seen immediately after the fillings are inserted, years sometimes elapsing before the injurious effects were felt and noticed.

The history of two well-marked cases were here given by Dr. Talbot, the persons affected having called upon him for treatment. The amalgam fillings were removed, and gutta percha temporarily substituted, these in turn being replaced with gold, after which all symptoms of mercurial poisoning disappeared. A detailed account of a series of experiments made by him were then presented, the conclusions and results being as follows :

First—Mercurial vapor is given off from amalgam fillings at all ages and from all varieties, even from fillings sixteen years old, the vaporization being sufficient in quantity to respond to chemical tests.

Second—Minute doses of mercury, if taken internally three times a day, are capable of producing decided effects.

Third—Mercury when inhaled into the lungs is far more active than when taken into the stomach.

Fourth—If small doses taken into the stomach occasion-

ally are capable of producing marked effects, and the vapor is much more active than the solid preparations of the metal, is it not a necessary consequence that amalgam fillings which are constantly giving off mercurial fumes to be inhaled into lungs, not a few times daily, but always, without cessation, day or night, is it not a necessary consequence that in many sensitive persons such fillings must produce deleterious effects?

Fifth—When tons of this material are consumed annually, is it not credible that many constitutions are affected?

Sixth—Physicians in treating dyspeptics, æminics, and persons suffering from nervous debility, would do well to examine the mouths of patients and know if artificial teeth on red rubber or fillings of natural teeth have in their composition mercury or any of its compounds.

How Dentists Should be Educated was admirably presented by Dr. W. W. Allport, of Chicago, in an article of considerable length. The introduction was a review of dental surgery in the past, it, with all other branches of medicine, having emanated from a common centre, and the possibility was that in the future these diverse systems would more and more tend to consolidation. Then touching upon the very core of his theme, Dr. Allport said :

The dental surgeon must be educated both in mechanical dentistry and dental surgery, for no disease can be intelligently treated without knowledge of the histology, anatomy and the physiology of the organ or organs diseased, as well as the pathology, prognosis and rationale of the treatment employed to restore the parts to a healthy condition; and this is medical science. The successful dental surgeon must have a thorough medical education in all its branches, supplemented by special instruction in dental surgery. Over forty years ago Drs. Harris, Hayden and others sought to establish a department for teaching dental surgery in the medical department of the University of Maryland, but their application was refused. Dr. Harris, however, succeeded in organizing what was known as the Baltimore College of Dental Surgery, and the graduates of this institution were given the degree of D. D. S.—doctor of dental surgery. In addition to this, several medical colleges have been induced to establish dental schools in connection with their medical departments, but as yet none of these institutions have required a full medical education of their dental graduates.

All dental surgeons should receive a medical education and become legitimate specialists in its practice, and all

medical graduates should be as fully educated in diseases of the teeth and the science of their treatment as they are in other diseases.

Medico-Dental Science, by Dr. J. B. Lawrence of New York city. Following are a few of the main points touched upon by the speaker.

All organized efforts for the dissemination of dental knowledge and the advancement of dental interests have been made since the year 1840. It was estimated then that there were 1,200 dentists in the United States; their practise was in a primitive state, and all instruments, appliances and apparatus were guarded with more or less secrecy lest one dentist should profit at the expense of the experience of another. Much was done to modify this feeling between 1840 and 1860, but even at that date the dental child was a very puny one. Now there are 25,000 persons in the United States engaged in the practice of dentistry. But many of these have but a limited knowledge of the human body, because their education is limited and they changed from some other occupation to this in the twinkling of an eye and settled down to the practice of the profession because it paid them better than anything else they could do. These are the so-called dentists of the rural districts, and they have almost a counterpart in a certain class of dentists in the cities who have a few books, a fair supply of instruments and a big microscope, which is more an expensive toy than an actual aid to them. They undeniably know something of dentistry, but have little or no knowledge of any other organ of the human body. Such men evidently can do but little to benefit a patient aside from the mechanical work demanded in the removal of aching members. The truth is, the dentist should have a general knowledge of all branches of materia medica, and special education in anatomy, physiology and chemistry, as well as in his special field of dental and oral surgery. The ice-clad mountain of knowledge has been carefully but cunningly scaled instead of having been penetrated and tunneled, that its rich nuggets of wisdom might the better be mined; and although the characteristically cunning Yankee has generally found his pot of money, in the eyes of a student he is still dangling upon the end of his Alpinestock at the dangerous end of a mighty glacier.

With the reading of this paper the Section adjourned *sine die*.

Editorial.

American Medical Association —From all reports we have seen, the cordial hospitality and social entertainments extended by the profession and citizens generally of St. Paul to the attendants upon the recent session of the American Medical Association, outrivalled anything of the kind in the history of the organization. Refreshing lunches, sumptuous and magnificent dinners and suppers, evening entertainments of every pleasurable kind, numerous and extensive excursions to various points of interest throughout Minnesota and adjoining States were abundantly provided. But the weather was exceedingly hot; as one of the newspaper reporters puts it, the thermometer ranged somewhere between 95° and 1000° F.

The attendance was unusually large—over 800 delegates and members being present—besides their wives and daughters and other friends. Among the delegates were some half dozen or more female physicians, who manifested much interest in all of the scientific work of Sessions and Sections.

We have devoted as much space as possible in this issue to a full synoptical report of the proceedings of the general meetings and of the Sections. As to the work done in the Sections, there were comparatively few papers and discussions which exhibited any special pre-eminence of the authors over the ordinary general practitioners of the country.

Of the proceedings of the general sessions, as items of interest may be noted, the failure to change the by-laws of the Association so as to let permanent members vote on matters of general professional interest; also the failure to change the law which now prohibits any but those in attendance upon sessions to hold office of any kind in the Association; the determination to hold every second annual meeting in Washington, D. C.

But the matter of most interest to all of our readers, no doubt, relates to the decision of the Association in regard to the admission of delegates from the New York State Medical Society. Of course, as was to have been expected, the Association declined to admit delegates from that Society. But we regret to see that this exclusion was done so summarily—that even a hearing was not given those who represent the views of the Society, etc. There can be no doubt that the New York Society acted with imprudent haste in taking

the step it did, if it really desires a professional reform. The act was revolutionary; but we maintain that it would have been better for the accomplishment of the design had the Society remained in the Association and fought the matter out *in the Union*. The action of the New York Society at once debars those in other States who are either in partial or total sympathy from coming to their assistance.

A matter of as much importance as the above is the determination to establish *The Journal of the American Medical Association*, which is to take the place of the present publications of the Transactions of the American Medical Association. We have long since expressed our hearty approval of the establishment of such a journal. A suggestion which we think would possibly add to the value of this Journal is that the Editor-in-Chief should select as his Assistants one from each of the several general sections of the United States. Such an arrangement would at once destroy any idea of sectionalism in the conduct of the journal; while it would also widen the field of subscribers even from among that class who do not propose to join the Association.

Several Accepted Original Communications are unavoidably crowded out of this number of the *Monthly* on account of the space given to the report of the Proceedings of the American Medical Association, etc. But these communications will appear as rapidly as possible, in the order of their receipt and acceptance.

The Arctic Sacrifice.—In the Siberian waste, with De Long, of the *Jeanette*, was found the body of a Virginian, Dr. Jas. M. Ambler, of Fauquier county, Va. Dr. Gaillard thus speaks of him :—"True in his fidelity as the medical officer of his ship; sharing all the perils of his commander; devoted in his duties to the crew, and at last laying down his life with those whom he could no longer aid and serve. A gallant surgeon; true in life; and true even unto death."

The Gross Professorship.—The Alumni of Jefferson Medical College propose to endow a Chair of Pathological Anatomy in that College in honor of Dr. Samuel D. Gross. The *Medical Times*, June 17th, says: "There can be no doubt that this endowment fund will soon be subscribed and offered to the Trustees of the College." Such an enterprise, we are sure, will succeed.

The Association of Editors of the American Medical Journals, it seems, had no session at the appointed time during the session of the American Medical Association, as none of the officers were present. As the Editor of the *Medical Monthly* was honored with the Presidency of the Association during its meeting in this city in 1881, he wishes to express his regrets to his brother editors that circumstances unavoidable and unexpected prevented his attendance, or even the sending of the rough-hewn draft of his intended line of remarks. It is also due to the Vice-President of the Association, Dr. Raalph Walsh, of Washington, D. C.,—the editor of that excellent and almost invaluable "*Retrospect*" which bears his name—to state that he telegraphed the President, stating that he would be unable to attend, and asking that his regrets be expressed to the Association. Our hope was, at the hour when we found it was too late to go, that the generally prompt Secretary, Dr. Dudley, of the always wide-awake *Medical Herald*, of Louisville, Ky., would be present and call the meeting to order, etc., as seems to have been the custom with the Secretaries of several of the Sections of the American Medical Association during the recent "good times" in St. Paul. We would say no more, but—we'll meet next June in Cleveland, receive our reprimand and elect another President. The editor of this journal bows meekly to remarks made as to his shortcomings in reference to apparent negligence in attending to duties proper to him to fulfill as President of so representative a class of the medical profession as that composing the Association of Editors of the American Medical Journals.

Dr. E. S. Hale, late of New Orleans, has determined to locate in Richmond. He has purchased the elegant residence at the northeast corner of Grace and Fifth streets, and will move to this city about September, 1882.

Prof. Joseph Leidy.—The friends of this eminent physician propose to raise a fund of \$100,000, the interest of which shall be paid him during his lifetime, and thereafter to be applied to the maintenance of the "Joseph Leidy Chair of Anatomy" in the University of Pennsylvania. Dr. William Pepper will receive subscriptions, 1811 Spruce street, Philadelphia, Pa.

The St. Louis Druggist.—The prospectus of this new journalistic enterprise is before us, from which we learn that

about September 1st, the *Druggist*, with an excellent corps of managers, will issue its first number. For further information, address the Druggist Publishing Co., 618 north Second street, St. Louis, Mo.

The Daily Pioneer Press and the *Daily Globe*, of St. Paul, Minn., contained admirable reports of the proceedings of the late session of the American Medical Association. We are indebted to Dr. Talbot Jones, of St. Paul, and Dr. F. D. Cunningham, of this city, for copies. We would recommend to our readers to get a full file of the *Pioneer Press* and *Globe* containing the reports. A year ago, with a full corps of experts and physicians, we made the effort to give daily reports of the session held in Richmond. The difficulties attending the enterprise were not small. The success of these papers was admirable. The professional reader will have little difficulty in correcting the typographical errors of technical expressions which found their way in these daily papers.

The Hygeia Hotel, all the year round, is about the best place in America for one to visit for pleasure or for health. The splendid improvements made during the past year by the proprietor, Mr. Harrison Phoebus, makes the Hygeia in all respects what is demanded by those in quest of rest, health and pleasure.

Mosquitoes carry parasites from one human body to another, says Meisoner. We had all along thought that there was nothing in us so bad as that placed in us by the mosquito, through his blood-sucking proboscis. But has not Meisoner carried his researches a degree or two too far?

Poisons.—A bill has been introduced into the New York Assembly (*Gaillard's Medical Journal*, May, 1882) ordering all persons selling poisons of any nature to put up the same in a corrugated bottle or box, with a printed label, giving the antidote in English and German.

Dr. Oliver Wendell Holmes has served for thirty years as the Hersey Professor of Anatomy at Harvard. The prophet never grows old!

University of Virginia.—At the Commencement held June 28, 1882, the following gentlemen received the Degree of

Doctor of Medicine from the Medical Department of the University of Virginia: S. S. Alexander, Kentucky; R. A. Berry, South Carolina; J. E. Coles, Virginia; S. G. Dabney, Virginia; R. W. Knox, Kentucky; J. C. Minor, Virginia; W. E. Price, Virginia; R. L. Robertson, Virginia; G. W. Stockwell, Indiana; C. Skinner, Kentucky; C. Wade and C. P. Wertenbaker, Virginia.

The American Neurological Association held its Eighth Annual Session in New York city on June 21. The *Medical Record*, June 24, says the attendance was good, and the papers read were of the usual interesting character. The Association was entertained by its President, Dr. William A. Hammond.

Dr. John L. Atlee, the recently-elected President of the American Medical Association, was born in Lancaster, Pa., November 2d, 1799, and lives at the place of his birth. He graduated from the Medical Department of the University of Pennsylvania in 1820. He was one of the founders of the Pennsylvania State Medical Society in 1848, and was its President in 1857, and was a Vice-President of the American Medical Association in 1868. He has always taken a lively interest in the cause of education, and has contributed many articles to medical journals. In 1843 "he revived the operation of ovariectomy, and was the first to successfully remove both ovaries at one operation." This venerable physician is worthy of the distinguished honor recently conferred upon him.

The American Surgical Association held its regular session in Philadelphia during the latter part of May, 1882. It was well attended, and was a very profitable meeting. We regret not having space to insert a synopsis of the proceedings of the session; but the *Medical News* of June 10th, 1882, contains an excellent report, which makes it less important that we should reprint it. Send ten cents to Messrs. Henry C. Lea's Son & Co., Philadelphia, and get a copy of their journal, which will also serve as a specimen copy of that excellent new weekly medical periodical—the *Medical News*.

The Medical Society of Virginia will convene at the Fauquier White Sulphur Springs, Va., some time during the latter part of September, 1882. The profession of Fauquier and the adjoining counties is actively at work for the success

of the session. A number of the Fellows in other sections of the State are also working. Let no moment be lost to do what can be done to make the meeting interesting and profitable. Let us greatly increase the membership of the Society. The regular announcement by the Executive Committee will be issued during August. We trust that there will be many offers of papers for the "Ex-Presidents' Prize Essays."

Obituary Record.

Sir John Rose Cormack, born in Scotland in 1815, graduated at Edinburg in Medicine in 1847, and died in Paris, May 13. He was chiefly instrumental in the establishment of the *Edinburg Medical Journal*. Just prior to the Franco-German war, he moved to Paris, and was there during the siege and the rule of the Commune. His eminent services were alike recognized by the French and English Governments; the former made him a Chevalier of the Legion of Honor; the latter, a Knight.

Geo. Campbell, A. M., M. D., LL. D., late Dean of McGill University, Montreal, Canada, died in Edinburg on May 30, 1882. For forty years he occupied the Chair of Surgery in McGill University, when, on account of failing health, he resigned in 1875. He was born in Scotland, 1810, and removed to Canada in 1833. The *Canada Medical and Surgical Journal* (June, 1882) pays fitting tribute to the memory of this eminent physician.

Surgeon-Major Hughes, of the Grant Medical College, Bombay, a native of Toronto, Canada, and graduate of the University of that city, recently died in Bombay from the effects of "blood poisoning, caused by a small puncture, received while performing a trifling operation."—*Canada Med. and Surg. Jour.*, June 1882.

Prof. C. Heuter, of Greifswald University, who had been the assistant of Virchow and Langenck, died recently at the age of forty-four at Greifswald, Germany. He wrote works on "Special Surgery," "Joint Diseases," which are standard treatises.—*Med. Rec.*, June 24.

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Original Communications.

ART. I.—**Otology for General Practitioners.** By F. TIPTON, M. D.,
Selma, Ala.

The favorable manner in which the writer's article on "Ophthalmology for General Practitioners" was received, has inspired the hope that some general remarks of the same tenor in the much neglected and little understood field of otology might commend themselves to a like consideration and accomplish a similar good.

Diseases of the ear are fewer in number, and are less amenable to treatment than diseases of the eye; and, until recent times, the care of the ear has been relegated almost exclusively to the ophthalmologist, being, so to speak, tacked on to the care of the eyes more as an unavoidable addendum than otherwise.

An illustrious teacher once said that "the known science and practice of otology began and ended in washing out wax;" and at that time no doubt he spoke correctly; but the labors of recent workers in this branch of surgery have accomplished much, and we now find in all the larger cities men of ability and talent who devote themselves exclusively to this little organ.

The ear is divided into—1st, *the external ear*; 2d, *the middle ear*; 3rd, *the internal ear*—all of which are liable to disease, and require, generally, different modes of treatment.

The external ear comprises all that portion situated external to the tympanum or drum cavity, and includes the auricle, the external canal and the drum-head.

The middle ear is the drum cavity with the drum-head to separate it externally from the external ear, and terminates at the labyrinth or internal ear. The Eustachian tubes, from the pharynx, and the mastoid cells of the mastoid process, open into the drum cavity, and are important anatomical relations to be remembered.

The internal ear comprises the remainder of the aural apparatus, and is too complicated in its anatomy to warrant description in this article.

These three divisions, then, must be kept in mind, viz: *External ear, middle ear and internal ear*; also the location of the Eustachian tubes and mastoid cells. With these points well fixed in memory, it is an easy matter to locate such diseases of the ear as will fall to the care of the general practitioner, who can, with a little patience, soon learn enough to acquit himself very creditably both in the treatment of the diseases of the ear and also in the opinion of the specialist, to whom he may send some of his more intractable cases.

The instruments needed are an otoscope or forehead mirror, a set of Gruber's specula, a pair of fine, mouse-tooth, right-angled forceps, Buck's cotton holder and curette, one good ear syringe of at least two ounces capacity, and one good Politzer-bag.

The greatest trouble in examining the ear is in illuminating it properly. This art once acquired, the use of the probe, the curette, and the forceps becomes simple and very readily learned.

The beginner will, at first, find some difficulty in keeping his forehead mirror so adjusted as to illuminate the ear whilst he uses one hand to hold the speculum and the other to make applications or to curette out foreign substances, cerumen, etc., or to remove polypi; but very happily it is an art soon acquired and the tyro must not become too easily discouraged. The writer well remembers his utter despair and disgust at his first attempts at this manœuvre; but one or

two clinics gave the necessary confidence, and the trouble was soon over.

The diseases that oftenest fall to the care of the general practitioner are as follows :

Of the external ear :—

1. Accumulation of wax.
2. Circumscribed inflammation or boils.
3. Diffuse inflammation.
4. Foreign bodies.
5. Parasitic inflammation (*aspergillus*).

The first condition is readily recognized with the speculum and head-mirror, and easily removed by syringing, which should be done in the following way : Direct the point of the syringe either to the roof or floor of the canal and not directly backwards as is often done ; and if not successful in the first attempt, drop a little dry soda into the canal and let it remain until the next day, and try again. The second, third and fourth conditions can also be easily recognized by inspection and a little care. The fifth condition is more rare, and requires the use of the microscope to determine accurately. Where you have a chronic, branny, desquamating inflammation within the canal, you can be almost sure that you have this condition.

In treating acute inflammation, first use Magendie's solution of morphia, ten drops for adults (or five to fifteen drops of laudanum in case of children), instilled into the ear. Wring out flannels in hot water and cover the ear well with them ; over this, place oil silk and tie on with a dry bandage to avoid soiling the pillow. Renew when cold, and if this fails to relieve the pain try constant douching with a fountain syringe playing in the canal ; and if this fails, either leech or scarify the canal until it bleeds freely. Do not be afraid of the knife ; use it freely, and afterwards douche again with warm water.

The fourth condition, viz., foreign bodies, can always be removed by patient syringing and the careful use of the curette and forceps.

When the use of the head-mirror is once learned, all the difficulties fast vanish ; and it is surprising to find how much

confidence comes with the acquirement of this simple manœuvre. The fifth condition is best treated by syringing with boracic acid—ten to twenty grains to the ounce of water, and keeping the canal scrupulously clean.

Before speaking more of special diagnosis, I wish to condense, in a few words, some general diagnostic points which the practitioner will do well to bear in mind.

1st. Nearly all troubles of the ear which are accompanied by tenderness of the meatus and surrounding parts are due to disease of the external ear, excepting mastoid tenderness, which is posterior to the auricle and is easily recognized. 2d. All cases of *sudden* deafness, pain, roaring in the ears and vertigo are due to either impacted wax or acute catarrh of the middle ear. 3rd. Ninety cases of chronic ear troubles out of one hundred are due to chronic middle ear catarrh, either non-suppurative or suppurative; nine cases, perhaps, to external ear troubles, and the remaining one to the internal ear. 4th. Ninety-nine cases out of one hundred of discharges from the ear denotes middle ear disease; the remaining one, external ear disease. 5th. Ninety-nine polyps out of one hundred spring from the middle ear. 6th. A perforation of the drum-head, not due to any violence, denotes previous or present catarrh of the middle ear.

In examining the drum-membrane: Congestion and redness denotes acute catarrh of middle ear; fullness of the membrane denotes fluid in the cavity; pearly whiteness and retraction denote chronic non-suppurative catarrh; perforations or polyps denote chronic suppurative catarrh, as does also complete absence of the membrane. These are about the only conditions that will come under the observation of the *general* practitioner, and if he will only bear these diagnostic points in mind, he will rarely fail in making up his diagnosis.

To be accurate, the ear should be always mopped out with absorbent cotton, so as to expose the field thoroughly.

The usual test for hearing is the watch, which should be heard at three feet distinctly; this, however, is only approximate and not absolute.

The tuning-fork is sometimes an invaluable aid to diagnosis. When a tuning-fork is made to vibrate on the teeth or vertex, the sound is heard with equal distinctness in both ears when healthy; but if either is much diseased, the *un-sound* ear will hear the vibrations with the *greatest* distinctness, because the diseased condition opposes a ready exit for the sound-waves as they are conducted by the bones of the head to the hearing apparatus. Thus, by using this test, we can determine the unsound ear without further examination. It is in the diagnosis of the diseases of the internal ear and auditory nerve from diseases of the middle ear, however, that the tuning-fork finds its chief usefulness; and in a question of doubt, the fact that *the sound is not heard at all* in one ear, or in both ears, shows that the internal ear is hopelessly diseased—that the auditory nerve is destroyed. So long as the fork is heard, the auditory nerve is working; but when the sound is lost, then all hope of hearing is lost with it.

It would be well for the beginner to examine every normal ear that he can, for he must first become familiar with the healthy appearance of the drum-membrane, before he can recognize diseased states. Seat the person before a bright light—say a window or argand burner; I use either, indifferently. Turn the ear to be examined to you; put on the head-mirror, and turn it to and fro until a focus is thrown on the ear; then insert the largest speculum you can into the canal. Move the head back and forth until you find the tube well illuminated; then maintain this distance whilst examining or working with the ear. One or two attempts will bring the necessary skill in illuminating, and then the battle is nearly won. If it is difficult to see the drum-head, take the mirror off the forehead and use it as a hand-mirror; this will aid you in learning to manipulate from the forehead. All observations must be made with both eyes open, and the right eye looking through the central perforation of the mirror. It is sometimes well for beginners to close the left eye until they get the proper illumination with the right eye; then open it again. This will prevent confusion and

the effort which some make of focusing with the left eye instead of the eye behind the mirror. Suppose the ear to be healthy, you must observe the position, color and general appearance of the drum; note the position of the little bone running down to the centre of the membrane, and fix all the normal appearances in the mind.

Now let a patient come with pain and deafness, and, perhaps, roaring in the ear; if it came on suddenly, there are two conditions we suspect at once—either an accumulation of cerumen, which has become suddenly swollen from bathing or washing the ears, or it is an attack of acute middle-ear catarrh. We can throw out inflammation of the external ear by the absence of tenderness on the outside. Now examine for wax, and if you find it you may use your curette a little, just to practice the eye, the head and its mirror and the hand, all of which must learn to act in concert. You may attempt to gently curette out a little wax, or wipe out the ear with absorbent cotton, but it is well not to try your patient too much at first, or he may become disgusted and not return. If you find no wax and find the drum congested, the diagnosis is clear: you have to deal with an acute or subacute catarrh of the tympanum. Look in his throat and, ten to one, you will find the acute pharyngitis from which it took its origin through the medium of the Eustachian tubes. By far the largest majority of middle-ear troubles take their starting-point thus, and the throat should be examined in all cases, both acute and chronic.

Before going into details concerning the treatment of diseases of the middle ear, I wish to define the scope of this article to be rather the diagnosis of disease than the treatment; for if this be made easy and practical, such treatment as is available can be easily found in the works of Roosa, Buck and Burnett, in the most practical form. In making any diagnosis in diseases of the ear, first find the seat of the disease, with the speculum, the tuning-fork and the touch. Having located it in some one of the divisions of the ear, run over in the mind the diseases which are found in this division, and a mistake is thus rendered impossible.

To proceed: The diseases of the middle ear are—

- 1st. Acute catarrh, non-suppurative.
- 2d. Chronic catarrh, non-suppurative.
- 3d. Acute catarrh, suppurative.
- 4th. Chronic catarrh, suppurative.
- 5th. Mastoid disease.
- 6th. Polypus.

Acute non-suppurative catarrh of the ear is the earache of children, with which we are all so familiar; it constitutes, also, most of the earaches of adult life which complicate a severe cold in the head or throat—in fact, all mild earaches, as well as some severe ones, unaccompanied by discharge, are due to this cause when not traceable to diseased teeth or inflammation of the external canal. The only condition liable to be confounded with this is next to be described.

Acute catarrh (suppurative) is only a more intense inflammation of the same tract, and requires the same treatment previous to the discharge of pus. This is the form of ear trouble which so frequently complicates small-pox, scarlet fever, measles, etc. The treatment of both is hot douching, instillation of Magendie's solution of morphia, free leeching around the ear and paracentesis of the drum-head, when the pain is great and rupture threatens.* This is not a very difficult operation when the art of illuminating is once learned, and the drum can be fully exposed. Any slender, sharp-pointed instrument will do. I have for this purpose a right-angled, spear-pointed blade. In children chloroform is necessary. After perforation the ear should be sponged with a solution of boracic acid, ten grains to the ounce; and after being well dried with absorbent cotton, some finely powdered boracic should be applied by insufflation to the whole canal, if the discharge promises to be chronic. This should be done as often as the discharge becomes profuse, twice daily if necessary; or iodoform, finely powdered, can be used, or else powdered alum; but boracic acid is the best.

*If any doubt should exist as to the presence of a perforation, inflating with the Politzer-bag will generally settle the question. If there be a perforation, the air can generally be heard to escape during the act, or can be seen in the shape of air-bubbles in the canal on inspection afterwards.

If this should not check the flow, solutions of nitrate of silver, from ten to forty grains to the ounce of water, can be tried. I have used them time and again without producing the slightest pain—(see Burnett—*Treatise on the Ear*). Sometimes it is best to mop out the canal without syringing, and then blow in the acid. Gentle Politzerizing should be used occasionally, pressing the bag gently in inflating; and the throat should be kept under constant supervision. Full details can be found concerning these matters in Buck's new work on the Ear, Wood's Library, 1880.

Chronic Catarrh of the Middle Ear, Non-Suppurative.—This is by far the commonest cause of chronic deafness, and results almost invariably from neglected throat and nasal catarrhs. The treatment of this condition is so tedious, and requires so much detail, that I will only allude to the diagnosis and to the principal points in its treatment, and refer the reader to Roosa's, Buck's and Burnett's works for further information.

When a patient comes complaining of chronic deafness, with no discharge from the ear, but a pearly white drum-head, somewhat sunk in, with or without chronic sore throat, the diagnosis is clear; it cannot be anything but chronic dry catarrh, and the prognosis is the more unfavorable the longer it has been neglected.

The treatment of these cases is that of nasal catarrh, with inflations tri-weekly with the Politzer bag. Make applications of nitrate of silver—twenty grains to the ounce—to the naso-pharynx and wash out this region with the post-nasal syringe several times weekly. (See Roosa and Buck.) The treatment is very unsatisfactory in these cases except in the mildest forms, and requires time and patience.

Chronic Suppurative Catarrh is neglected acute catarrh, and requires a persistence of the same treatment as has been detailed for checking the discharge in that disease. Constitutional measures should not be neglected whilst treating the local trouble; but better far is the prevention, and if this article can only direct a more rigid attention to the cases of otitis occurring so often in scarlet fever, measles, etc., this alone would well repay the labor of writing it.

The most scrupulous care should be paid to disinfectant syringing of the ear, to the application of astringents, and to the condition of the throat during the whole course of scarlatinous ear troubles, and often long years of suffering may be thus avoided.

There is a popular fancy that it is dangerous to suddenly check long-standing discharges from the ear. This is entirely fallacious, for so long as one has a chronic discharge from the ear, so long does the sword of Damocles hang in the shape of meningitis over them, and the physician is derelict in his duty if he does not make every endeavor in his power to stop at once and forever all such discharges as come under his supervision.

Powdered boracic acid well blown into the ear after thorough cleansing, will give most satisfaction in these cases upon the whole. They require much patience and many changes of treatment.

Mastoid Disease.—This formidable disease comes from neglected otorrhœa, and is announced by swelling, redness and tenderness over the mastoid process. This is always a serious condition, and should be promptly treated by leeching and by an incision down to the bone, and sometimes by trephining, the details of which can be found in the books.

Polypi come also from neglected otorrhœa, and nearly always spring from the middle ear. They should be removed by a fine snare—a simple operation and comparatively bloodless, when once the operator gains confidence in his fingers. The ear should be filled afterwards with iodoform finely powdered, which is also the best treatment for fine granulations and small polypi, too small for the snare.

The diseases of the *internal ear* are so rare that we can eliminate them from a practical article like this. With the exception of syphilitic disease, the probabilities are strong that the general practitioner will never encounter them.

One practical hint here will be sufficient, viz: when you have made a diagnosis of internal ear disease, that is, have located the disease in the internal ear by exclusion, you will rarely go amiss to give iodide of potassium; for nineteen cases of primary internal ear disease out of twenty are due to

syphilis. Remember that the diagnostic test of internal ear disease is weak or total loss of perception of the sound of the tuning-fork when vibrating on the teeth or on the vertex, entire deafness, sometimes great vertigo (Meniere's disease), nausea and unsteady walk.

As the writer said in the beginning, so he reiterates in the conclusion, this article is only written to attract attention to a much neglected study. In the busy struggle for subsistence, the overworked and inadequately paid general practitioner very naturally regards his time too valuable to be consumed in studying the copious treatises written on one of the many different organs which he is called upon to treat, and is often confused and at sea for just the kind of information in this branch that the writer hopes he has suggested the proper plan for acquiring easily and rapidly. Once fixing the general outlines in the mind, the subject can soon be filled out from reference books and special monographs.

Before closing, I will again tabulate the diseases which the general practitioner is most liable to meet.

The External Ear.—1st. Collections of wax.

2nd. Circumscribed inflammation (boils).

3rd. Diffuse inflammation.

4th. Foreign bodies.

5th. Aspergillus.

Middle Ear.—1st. Acute and subacute catarrh—*non-suppurative*.

2nd. Chronic catarrh—*non-suppurative*.

3rd. Acute catarrh—*suppurative*.

4th. Chronic catarrh—*suppurative*.

5th. Mastoid disease.

6th. Polypi.

Internal Ear.—Syphilitic disease principally.

Bearing these points in mind, I feel perfectly safe in saying that any fair practitioner, after a little preliminary work with the head-mirror and speculum, can make as accurate a diagnosis as there is ever a necessity for, and can treat successfully many cases of disease that are at present neglected or misunderstood.

ART. II.—**Diseases of the Spleen.** By JOHN N. UPSHUR, M. D.,
Richmond, Va. (Read before the Richmond Academy of Medicine, May 1st
1882.)

The spleen is an organ of the body, which, up to this day, is of undetermined function, and its importance in the human economy, by many authorities, is considered of little value. It has been repeatedly successfully removed for disease, with no visible result, so far as the patient is concerned, except the development of great peevishness and irritability of temper.

In passing, it may not be amiss to suggest that, taking this irritability of temper as a diagnostic fact, we do sometimes, in some individuals, have *congenital absence of the spleen*, and that *these individuals* often enter the medical profession; and the physiological anomaly just referred to, is made conspicuous by the petty jealousies and quarrels where so often dignify and elevate and adorn our noble profession. For myself, at least in the present instance, I have cause for devout gratitude that I was born with a spleen of full size and weight; else the committee who imposed upon me such a subject might have cause to exercise that "charity which suffereth long and is kind," in bearing the abuse so richly merited from me for such an infliction.

Before entering upon the consideration of the "Diseases of the Spleen," it may be well, for a clearer apprehension of those I propose to discuss most prominently, to glance at the physiology of the spleen, to get in as clear a light as possible the role it plays in the animal economy in a state of health. Time and space forbid an elaborate description of the minute structure of the spleen. Suffice it to state what is familiar to you all.

The white, fibrous capsule, with its serous investment, sends numerous processes into the interior of the gland, dividing and subdividing, till a very fine net-work is formed. This capsule and its processes in man consist of connective tissue with elastic fibres. This beautiful net-work is filled with delicate blood-vessels and nerves, and various splenic cells; and in the meshes of this net-work is contained a red

pasty mass, known as the splenic pulp. The splenic artery is of unusual size as compared with that of any other gland in the body, when the size of the blood-gland it supplies is considered (except, perhaps, that of the thyroid gland), and its coats unusually thick. The splenic vein is five times the size of the artery, and varies in size at different periods, as during the process of digestion or when the organ is in a congested condition. The artery is very regular in its distribution throughout the gland, and its vascular districts are very uniform in size. In the ultimate distribution, the arterioles have, in close relation to them, little lymph cells, forming little tufts—the Malpighian bodies. These bodies, in their interior structure, resemble the follicles of the lymph glands. Wilhelm Mueller, from abundant investigation on various vertebrates, separates the splenic parenchyma into two constituents—"one *whitish*, connected with various parts filled the arterial system, which he calls *the parenchyma of the*

Berial sheath; and the other, *brownish red, rich in blood, the true splenic pulp.*" (Zeimssen, vol. viii, p. 354.) And this same authority, on the basis of his anatomical investigations, describes the *functions* of the spleen to be *the elaboration of white blood corpuscles and the steady supply of them to the blood current.* Max Schultz, an excellent authority, after seeing Mueller's large collection of the injected spleens of various animals, endorsed his views as correct; and Virchow's discovery of splenic leucocythæmia has added much in support of the present views held of the functions of the spleen. Finally, the blood of the spleen, normal in condition, contains a large excess of whitish blood corpuscles.

Dupeyren, Czermak and others have proved, by successful extirpation of the spleen, that it is *not* absolutely necessary to human life, and that it exerts *no influence* on the functions of digestion; though, after sometime, the *same condition* of the *marrow of the bones* is found as when leucocythæmia exists.

The spleen may vary in size in broad limits, without assuming a pathological condition. In many general diseases, it is found after death to be more or less congested or softened. In fevers—especially those of an intermittent or malarial

nature—the enlargement is often most marked, and not unfrequently chronic in character, yielding most markedly to large doses of quinine *pushed to the point of decided saturation*. The anæmia and chlorosis—the result of obstinate forms of this class of fevers—are due no doubt very often to a suspension or perversion of the splenic function, whereby an abnormal amount of whitish corpuscles (either more or less) find their way into the general blood current. When, too, many white corpuscles enter the general circulation, they form an important pathological condition of that serious affection, leucocythæmia.

All ages and sexes are alike liable to splenic affections; though, as to frequency, the male sex in many localities is mostly affected.

Enlargement of the spleen is sometimes found coincident with amenorrhœa in the female; and the restoration of the menstrual function is followed by a reduction of the hypertrophied organ. The middle period of life is the time when all the diseases of the spleen are most apt to develop. But so far as hereditary diseases of this gland are concerned, they only exist as they would in any other organ of the body, as where there was hereditary tendency to cancer, tubercle, syphilis, etc.

Like other organs, it may be the subject of simple hypertrophy or atrophy, of induration, of primary or secondary abscess, as a starting-point for septic poisoning, or the location of a pus depot where pyæmia exists, originating from idiopathic or traumatic lesion in some other portion of the body. Disturbance in the digestive organs react upon the spleen and prove a starting-point for disease.

In infectious diseases, the spleen is usually found, in *post mortem* examinations, to have been more or less involved in the morbid process; and, no doubt, it plays a much more important part in the symptoms, progress and result of malarial, typhoid, typhus and puerperal fevers, pyæmia, syphilis and tuberculosis than we yet comprehend; and in this direction a wide field for research is presented to the pathologists of the present and future. The experiments of Pautick, proving by the injection of coloring matters—cinnabar, india

ink, etc.—into the circulation, the retentive properties of the spleen, explain, to some degree, the enlargement of the organ, or the development of tumors in it, in these diseases. In other words, the spleen acts as a filter for the minute spores, micrococci, and minute germs which are, in whole or in part, the poisonous principles in these diseases. Birch-Hirschfeld has demonstrated the same facts as to the carriers of contagion as Paufick did in the coloring matters. Davaine claims to have found abundant bacteria in the spleen in cases of malignant pustule. Birch-Hirschfeld found enlargement of the pulp cells in pyæmia, and the same in puerperal fever, and in both instances containing micrococci. Heinrich says (quoted by Mosler in *Ziemssen's Cyclopædia*, vol. viii, p. 362), that “a great disposition to obstructions of the spleen was said to arise from the use of large quantities of mercury.” Mosler, however, says that, in chronic mercurialism, he has not found special morbid changes in the spleen. It has, however, so far as the effect of medicines is concerned, been very little observed—a fact to be regretted, and which it is to be hoped the early future will remedy. Increased volume of the spleen, no doubt, is often due to the action of those remedies which exert an influence on the vaso-motor nerves, producing dilatation of those vessels, thus allowing an increased volume of blood to flow into the spleen; likewise those pathological conditions which, in the same manner, affect the nervous supply. This inference is proved to be correct by the experiment of cutting the visible nerves of the spleen. In a vivisection in which this is done, the engorgement will be so decided and rapid that the opening through which the spleen had been drawn out for experiment, requires enlarging in order that it may be returned, and an autopsy a few months subsequent reveals a well developed tumor of the spleen. Oërtel suggests that enlargement of the spleen in swampy regions is due to muscular paralysis from long-continued innervation; and the above results of experiment add force to the suggestion.

The symptoms which arise and may be traced to disease of the spleen, form a part of pathology, difficult and uncertain. Often the first suspicion of trouble in the organ is

originated at the autopsy; and frequently, when vague symptoms of distress, uncomfortable sensations, etc., in the left hypochondrium are referred to the spleen, autopsy reveals that organ to be *free* from any pathological lesion. Hence it is very difficult, in the present state of our knowledge, to point out those symptoms which possess a true diagnostic value. The spleen is very little sensitive, and pain only exists in those cases in which the parenchyma is involved together with the serous covering of the organ. Of course, in cases of great hypertrophy, the sensation of a dragging weight in the left half of the abdomen is present, and produces, in some cases, so much distress as to oblige the patient to retain the recumbent posture, or wear an abdominal supporter. Disturbances of the digestive organs occur in various degrees in the various diseases of the spleen. It has been claimed that in dogs from whom the spleen has been removed, the appetite is very voracious; but more extended observation failed to confirm this, and tended to show that in many cases there was diminished appetite. Clinical observations substantiate this fact. Loosening of the gums and offensive breath are very important symptoms in splenic dyscrasia. Soreness of the mouth, of a scorbutic character, has been remarked in persons suffering from grave form of chronic malaria with enlarged spleen, failing to yield to treatment usually successful in scorbutic stomatitis. "Schlegel saw ptyalism in a young woman suffering from suppression of the menses from enlarged spleen. Wintringham and Verga mention increased salivation as a symptom of "scirrhus degeneration of the spleen." (Zeimssen, vol. viii, p. 372). Mosler says he has not observed salivation in disease of the spleen, except after the use of mercury. (Ibid.) Various and obstinate forms of nausea occur in splenic diseases due to pressure of the enlarged gland on the stomach, or reflex nervous sympathy. The fatal termination of many splenic diseases is brought about by colliquative diarrhœa.

The spleen and liver occupying the intimate relation to each other which they do, of course the spleen is often secondarily affected in diseases of the liver and *vice versa*. In ninety-two cases the leucæmia, collected by Ehrlich, the

liver was diseased fifty-four times. As colorless blood corpuscles under some circumstances pass through the walls of the smaller blood vessels, the leucæmic new formation of lymph-adenoid tissues in the liver is the result of direct infiltration of white blood corpuscles emigrating from the spleen. The same condition favors the transmission of coloring matter from the spleen to the liver in melanæmia.

In splenic disease, the mesenteric glands are often found secondarily affected. The respiratory organs are often secondarily affected, in various ways and from various causes. Dyspnœa in splenic disease may be due to *deficient respiratory capacity of the blood, from a diminished number of the red blood corpuscles*—the little oxygen carriers. In leucæmia, dyspnœa is one of the most prominent symptoms, since the diminution of red corpuscles is so great that only when the patient is in a state of rest are they capable of perfectly performing their function. Also excess of white corpuscles may produce a stoppage in the vessels of the lungs, a condition favored by their greater diameter and tendency to adhere to each other and the sides of the vessel. This is a condition apt to occur when the blood is leucæmic. Boettcher discovered that in leucæmia groups of small miliary granulations, as well as larger, and smaller caverns occur. These granulations are simple accumulations of lymphatic elements. "Boettcher demonstrated in the wall of many of the smaller bronchi, infiltrations with lymph cells, and also referred the formation of the small caverns to the rupture and ulceration of these bronchial infiltrated masses." (Zeimssen, Vol. VIII., p. 378.) Of course, any enlargement of the spleen which pushed up the diaphragm and thus encroaches on the cavity of the chest will be a cause of dyspnœa outside of the causes above referred to. Instances of this occur in pseudo-leucæmia where the normal proportion of the corpuscular elements of the blood is unchanged, yet where there is a diminution of both, indicated by the pallor of the patient, and in which splenic tumors occur; Mueller collected eighteen cases, and in fourteen dyspnœa was present, without any lesion of the respiratory organs. The average frequency of respiration was twenty-four to thirty-six per

minute. Blood rich in red corpuscles acts as a stimulus to the heart; hence when there is a loss of the red corpuscle, feeble impulse is to be found a condition present in anæmia from splenic disease. Occupying the important position as a blood-making organ, which the spleen does, it is easy to understand how the constituent elements of the blood are affected by any disease of this organ; and simple anæmia, leucæmia, melanæmia or other serious troubles follow in its wake, indicated, in many cases, by ascites, œdema or general anasarca with cardiac bruit, etc. How with the blood in this deranged condition, purpura, amenorrhœa, or menorrhagia may be the sequels is easily understood. Conditions only to be relieved by those chalybeate and nerve tonics, iron, quinine and strychnine, or such like remedies which, acting on the spleen through its vaso-motor nervous supply, cause a reduction in the splenic enlargement, and thus an altered and healthful performance of its blood-making function. "Virchow first stated that the secretion of uric acid was increased in leucæmia, and his observation was confirmed by Rauke, the latter deducing from this fact that uric acid in great part is formed in the spleen, and Pettenkofer and Voit obtained the same result in examining the urine of a leucæmic patient;" and by comparison with two healthy subjects, they demonstrated the increase in the leucæmic subject to be sixty-four per cent. Mosler says that in the examination of specimens that he had analyzed, the increase of uric acid was only found when there was *exacerbation of fever*; also that an *increase of uric acid* and its salts is *not constant in leucæmia*, hence he concludes that its presence is due to *deficient oxidation*, a relative insufficiency of respiration. Thus much for the symptomatology of splenic disease.

We will now turn briefly to the physical examination. Inspection of the abdomen in acute diseases of the spleen often reveals no visible change. In chronic splenic tumors the distention is often very great. Braune states that an enlarged spleen can be most readily felt during deep inspiration. Some few facts may be elicited by percussion, but this is a difficult field of exploration.

It follows that the spleen, obscure in its physiology and

pathology, is the subject of many and various remedies for the palliation and cure of its many affections. Where disease is due to constitutional vice, the remedies suited to combat and remove the cause, are alterative and tonic in character. If the stomach, liver or lungs be at fault, the same principle holds good. It is in splenic trouble due to infectious fevers that our greatest difficulty is to be met. Local remedies have thus far accomplished little good. Most is to be hoped for from bark, strychnine, iron, arsenic and quinine—the latter especially in large doses, kept up for a length of time—exercise in the open air and in a bracing climate. The dilute mineral acids, too, are of much value, given in conjunction with quinine; and phosphorus in its various forms is to be much relied on. The benefit from these remedies is derived chiefly from their action in giving strength and tone to the nervous system—the benefit to the splenic enlargement coming through the vaso-motor nervous system, producing possibly a less amount of blood circulating through the parenchyma of the spleen. In passing, I would say that the muriate of quinine is a more desirable form of administration than the sulphate—being much more soluble. Cold affusions over the regions of the spleen will be found of benefit in reducing splenic enlargement, as the low temperature produces directly contraction of the spleen, or ice bags may be substituted. Fowler's solution may be used subcutaneously in those cases where it has failed when given *per orem*. Bromide of potassium, too, has acquired some reputation. Mosler says he has proved by experiment that the tincture of eucalyptus globulus produces contraction of the spleen, just as quinine does. This remedy was first suggested by Lorinzer, of Vienna.

The local remedy which has been most prominently discussed is extirpation; but while the spleen has been repeatedly removed successfully, the operation does not grow in favor. All the uncertainties of diagnosis which are present in other abdominal tumors have to be overcome here, and the removals of leucæmic spleens have been so unfortunate as to make the proceeding one of very doubtful expediency.

Thus, in a manner to myself very unsatisfactory, and in a

general way, have I discussed diseases of this organ; and while it would be interesting to take up such diseases as leucæmia and melanæmia, and study the part played by the spleen in their pathology, your patience and space forbid that I should enter on their consideration, especially as the spleen, though playing an important part, is by no means the sole factor in their pathology, and the remedies most apt to prove beneficial are those already indicated in the foregoing pages. I have, also, only made a passing reference to those diseases which are liable to occur in other organs of the body, such as cancer, tubercle, syphilis, etc., whose presence will be recognized by their general symptoms, and whose treatment is the same as that which would obtain in any other organ or location. So far as I am aware, their presence in the spleen presents no diagnostic features of mark, except perhaps the supervention of anæmia with greater rapidity than if this gland were in its normal condition.

ART. III.—**Compound Syrup of the Hypophosphites of Iron.** By
C. G. POLK, M. D., Philadelphia, Pa.

The formula for this syrup was published in the *Druggist Circular*, January, 1875, page 28. It pleased many physicians, and has been ever since considerably used. The original formula contained the hypophosphites of iron, manganese, lime, quinia and strychnia; but in compliance with a popular demand, Mr. H. E. Ashmead has added the syrup of the hypophosphites of sodium. As made at the present time, each pint contains:

Hypophosphites of calcium.....	128	grains.
“ sodium.....	96	“
“ manganese	48	“
“ iron	128	“
“ quinia	64	“
“ strychnia.....	2	“

Solut. hypophosphorous acid, q. s.

Syrup sufficient to make one pint.

Mix.

This compound not being copyrighted, and being pub-

lished as the common property of the profession, any intelligent druggist can prepare it.

About 1876 a copyrighted preparation, supposed to differ from this formula only in containing potassium, and being pushed with much energy, has secured the endorsement of Milner Fothergill, of Lemox Brown, the *London Lancet*, *London Medical Times*, *London Medical Record*, and numerous other testimonials.

The copyright, however, does not affect favorably or otherwise the medical properties of the compound; the iron, manganese, lime, sodium, quinia and strychnia will possess exactly the same value, whether they have or have not the name of Jones and Brown attached to the compound syrup of them. It would not be very courteous to the members of the medical profession to intimate that either secrecy or a copyright can enhance in their estimation a therapeutical compound. The legitimate preparation is certainly all the secret valuable one that can be made. When (January, 1875, *Druggist Circular*) I published for the first time this formula, many of my personal friends thought that I had permitted my personal enthusiasm to carry me too far; that I had claimed for it entirely too much; but my statements were not then tinged by the excitement of novelty, or the partiality human nature is so apt to bestow on new creations. I had carefully tested this one, as I do every formula, before presenting it to the medical world. Time has since shown that I did not claim too much. In my paper I stated that the combinations of hypophosphorous acid with iron, manganese, quinia and strychnia were superior to the combination of lime and sodium (a reiteration of a statement made some months previously in the *Tennessee Pharmacal Gazette*); that they are powerful tonics and preparations of immense value in anæmia, vital exhaustion, scrofula, pulmonary tuberculosis and the various cachexiæ. I think this conclusion is justified by the statements of a large number of distinguished physicians.

Dr. J. Milner Fothergill says: "The combination is an excellent one; *the best* yet made, to my knowledge. It is a happy thought. It is a good sound tonic, especially indica-

ted where there is nervous exhaustion. It is readily digestible, and has given much satisfaction in my experience."

Dr. A. Tinsley, of 286 Druid Hill Avenue, Baltimore, says: "It is the best preparation of the Hypophosphites I have ever used."

Dr. Alexander Hodgkinson, Physician to the Hospital for Consumptives, Manchester, England, says: "I have found it a reliable restorative tonic. I have given it a fair trial in both hospital and private practice, and noticed an absence in its action of the chief objectionable effects consequent on the use of some of its ingredients when given alone, or when differently combined."

Dr. Trestrail, author of Dilatation of the Perineum, says: "I have been very much pleased with the syrup of the hypophosphites of iron, manganese, lime, potassium, quinia and strychnia in many cases, especially in anæmia consequent upon severe hæmorrhages. It quickly restores the quantity of the blood, and gives tone to the system, the effect upon the appetite and digestion being marked."

Dr. J. J. Jones has found this combination to be an efficient tonic and "a remedy of great value in general debility with emaciation and nervous exhaustion—meeting and combating successfully the indications for which it is recommended."

Dr. S. J. Moore, of Glasgow, Scotland, has found it to be "of much tonic power in cases of anæmia, and when there is much prostration of the nervous force from exhausting diseases."

Dr. Lennox Brown eulogises the preparation as possessing immense value in the exhaustion attending chronic diseases of the throat.

A large volume could easily be collected of testimonials of the efficacy of this combination. In 1875, when I first gave the formula to the medical world, I underrated its value, and really did not appreciate them, as I do now its use in many morbid conditions. Then, however, I said of it very much what Lennox Brown, Milner Fothergill and others have since declared.

During the past year I have been using a glycerite which

I like better than the syrup. The following is my formula:

Ry.	Ferric hypophosphite, grains.....	128
	Manganese hypophosphite, grains.....	48
	Calcium, “ “	128
	Sodium, “ “	96
	Quinia, “ “	64
	Strychnia, “ “	2

Sarge pure glycerine, sufficient to make a pint.

Solution of hypophosphorous acid, sufficient to dissolve the iron.

Dissolve the iron in one ounce of water acidulated with hypophosphorous acid; add the hypophosphite of manganese dissolved in one ounce of water, then the lime, soda, quinia and strychnia, and the required amount of glycerine.

Those who deem this method tedious may make a somewhat less elegant preparation by the following formula:

Ry.	Sulphate of iron	250 grains.
	Sulphate of manganese.....	60 “
	Hypophosphite of calcium.....	428 “
	Hypophosphite of sodium.....	96 “
	Sulphate of quinia.....	64 “
	Sulphate of strychnia.....	2 “

Dissolve the iron and manganese in two ounces of water; add 300 grains of the hypophosphite of calcium, and agitate until all the sulphates of iron and manganese are decomposed, then filter. Dissolve the remaining ingredients in thirteen ounces of glycerine; mix and complete the measure of sixteen ounces with glycerine.

The ferrous preparation does not form quite as pleasant a medicine as the ferric salt, and is more prone to precipitate. If the physician wishes the potash salt, he can employ it in the same manner as the sodium. The formulæ are preferable to the copyrighted preparation advertised in circulars of a popular character and through them sold directly to the people.

As the time is fast approaching when physicians will desist from the use of secret, proprietary and copyrighted medicines, I believe the resurrection of these formulæ may prove satisfactory to them.

2219 Catharine street.

ART. IV.—**Intestinal Obstruction.** By T. N. CLARK, M. D., Reagan, Texas.

The two cases by Dr. Polk in the March No., 1882, of the *Medical Monthly*, suggests the following report, which, as regards treatment, possesses enough interest, I think, to bear special emphasis:

CASE I.—In 1871 or 1872, I was called in haste to a young man suffering with what was thought to be “bilious colic,” who had, the day previous, recovered from a very mild attack of remittent fever, but now well enough to resume work on the line, as a topographical engineer.

After an ordinary breakfast and some little exercise, he commenced suffering violent pains in the bowels, as those of ordinary colic, which increased in severity, with an occasional effort to vomit, for the relief of which he took several drinks of ginger tea and whiskey, with laudanum at short intervals till evening—the time of my visit. Finding no marked constitutional disturbance—neither fever nor tympanites—and supposing the bowel trouble resulted from an excess of acid and deficient flow of bile, I at once administered mercury, morphine and ipecac, to be repeated every two hours; and, at the same time, the constant application of hot fomentations to the abdomen was ordered; also bicarbonate of soda internally.

A few hours after leaving to visit other patients, I was hurriedly recalled to find the patient’s sufferings greatly increased—coming on in violent paroxysms, with short intervals of ease. As the bowels were still unmoved, I determined to procure an action, and, as I believed, with it, relief. For this purpose, I gave large doses of castor oil and enemata of warm soap-suds—each containing a drachm of turpentine—at intervals of two hours, until the night was far spent; yet no relief followed. Distending the bowels with large quantities of warm soap-suds was tried; salts were alternated with the oil, and an occasional dose of extract of jalap was given until noon on the following day, with yet no improvement, but rather increased spasm of the bowels and ineffectual efforts at vomiting.

His bowels had now become tympanitic and excessively tender; his pulse was small and frequent, and he had great thirst for water, which was immediately ejected as soon as swallowed. At this period of exhausted resources, I yielded to the solicitations of others, and gave half-drop doses of croton oil every two hours. Finally, convinced of the folly

of forced catharsis, I abandoned every internal agent; but I directed opium, gr. ij, every two hours, which the third dose *seemed* to relieve; but it was the relief which gangrene brings, as he died four hours later.

CASE II.—My little boy, aged eight years, ate a few hard, imperfectly matured peaches late in the afternoon, last August, from which he felt no disturbance till immediately after dinner the following day, when he commenced crying with paroxysms of pain in his bowels. Thinking it resulted from temporary acidity with flatulent distention, I gave him a full dose of laudanum and spirits of camphor in mint-water. As the dose was soon repeated without relief, and thinking it too late for an emetic, I endeavored to open the bowel by cathartics, which were faithfully plied until ten o'clock at night, and still no action. His pulse became very frequent, with constant thirst, and an ineffectual effort to vomit. After becoming assured of something more than ordinary obstruction, and dreading the possibility of intussusception, I abandoned everything else for belladonna and morphia—giving the extract in quarter-grain doses every three hours, combined with just enough of the sulphate of morphia to quiet the pain. At daylight, after the fourth dose, his bowels acted, and he was well.

CASE III.—A. S., a farmer, aged 24, who had always enjoyed undisturbed health, commenced suffering with pain in the bowels on the 24th February last, and took a dose of laudanum, followed by ten grain-dose of calomel, which, not relieving him in four hours, was repeated. In six hours, this was followed by a full dose of salts, and within two hours the aid of castor oil was asked, without any action, however, on the bowels; this medication was followed by a constant increase in the frequency and severity of the paroxysms. I visited him on the second day of the attack, and found him with violent paroxysmal pain in the abdomen, and more particularly excruciating just above the sigmoid flexure of the colon. Also, there were frequent efforts to vomit; but nothing was ejected except a little fluid, tinged with bile.

As he had been suffering already about twenty-four hours, with several does of cathartics and anodynes administered, and yet no action of bowel nor relief from pain, I recognized the possible gravity of further development; but not feeling fully satisfied with the result of his self-prescribed doses, I directed him to have an ounce of castor oil every five hours, and twenty drops every three hours of a mixture composed

of equal parts of laudanum, chloroform and fluid extract of gelseminum.

On the following morning, I found him still unrelieved. The medicine was punctually given, with yet no action; but the oil was now vomited, as was also water soon after being swallowed. He had spent a sleepless night, and his pulse, previously normal, was now about 100, with more thirst and vomiting. I became convinced that a cathartic treatment, if continued, would greatly increase the existing trouble; and I prescribed extract of belladonna, gr. ss, every three hours, with hypodermic of morphia sulphate sufficient to relieve the severe paroxysms. I also used large injections of warm soap suds, containing a drachm of spirits of turpentine, and repeated these doses again and again. I then used hot mush poultices, constantly applied over the abdomen. This treatment was continued for twenty-four hours with no improvement, but increasing tympanites and soreness of the abdomen, with more thirst and frequent vomiting, every effort of which was becoming more painful.

As the prognosis was very unfavorable, I called to assist me Dr. J. C. Shaw, with the view of giving the patient the benefit of his skill in surgery as a procedure of last resort, if the case required the necessity. In accordance with his suggestion, forced distension with a "fountain syringe" was used for two hours—washing from the lower bowel a quantity of offensive fluid and fecal matter; but the patient could feel the distension reach the upper part of the sigmoid flexure only. "There it stops," he would remark, placing his hand over the region. Failing to achieve any good from local treatment, and as the constitutional symptoms were not immediately threatening, it was decided to continue belladonna in full doses—one grain of the extract* every three hours—until its action became manifest, with the continued hypodermics of morphia, often enough to procure rest and relief.

On the following morning, there was a diffused, dusky appearance of the general cutaneous surface, from capillary congestion, with slightly dilated pupils, and about ten o'clock "stercoraceous vomiting" commenced, identical in smell and

* This was a peculiar case; hence the Doctor used the large doses of extract of belladonna here mentioned. It must also be remembered that the extract of belladonna was given with morphia—each the physiological antagonist of the other. We make this foot-note only because of the fact that some of our readers, forgetting or not thinking of the size of dose of extract of belladonna, might prescribe too large doses of belladonna, under similar circumstances, when no opiate is used.—EDITOR.

appearance with that which passed off with the enemata from the lower bowel on the previous day. So exceedingly offensive was the fluid ejected from the stomach, that carbolic acid became necessary to render the atmosphere of the room tolerant—a little of which was also given internally. For six hours, this reversed peristaltic action continued, until a quart or more, probably, of this peculiar fluid was thrown off, when, finally, a free action from the bowels arrested the vomiting and inaugurated a slow, but steady convalescence.

Some soreness and pain continued for several days later, as also a circumscribed capillary congestion over the region of the sigmoid flexure of the colon.

Briefly reviewing the foregoing imperfect record, my conclusions are, that mild cathartics do no good, and drastic ones do incalculable evil, as evidenced by *Case I*. The earlier we resort to belladonna and morphia, the sooner may we overcome the trouble, as in *Case II*. Had active cathartic treatment been persevered with in *Case II*, strangulation would probably have been the result; and in *Case III*, there could be no doubt of it.

An interesting feature in the last case (III) was, that there was no improvement until the physiological effect of the drug was fully developed.

Clinical Reports.

Hypodermic Use of Quinine in Congestive Fever. By H. R. DUPUY, M. D., Cartersville, Va.

In the January (1882) number of the *Medical Monthly*, there is an article under the above caption from Dr. Sawyer, of Alabama. I would like to add another case illustrating the necessity of this mode of administration of quinine in some conditions.

During the month of May, 1882, I was called to see a feeble, anæmic child, aged fifteen months, whose system was debilitated by teething, diarrhœa and frequently recurring attacks of intermittent fever. This condition had been combatted by small doses of calomel, prepared chalk and opium, and the use of quinine applied by inunction, combined with vaseline, which seemed to hold the disease in check, though

not to relieve it entirely. The stomach had been in such an irritable condition, that it would not retain quinine at all.

About 3 o'clock, on the morning of the 19th of June, I was called in haste to see her. I found her with fever, vomiting and purging, exceedingly restless, and tossing from side to side of the bed. The actions from the bowels seemed to be nothing but curdled milk suspended in colorless water, with not the slightest trace of bile. I placed a blister over the stomach and liver, and gave her a powder containing

R̄ Rhei mass.....gr. $\frac{1}{3}$
 Quin. sulphat.....
 Cretæ preparat..... \overline{aa} gr. ij

M.—S.: To be repeated every three hours.

This was kept up until fifteen grains of quinine had been administered, without any effect whatever. The fever had assumed a remittent type—the evening exacerbations coming on with increased violence, and likewise the morning. In fact, I thought the child would die before daylight.

Seeing no influence from the quinine, though a large quantity had been administered, I determined to use it hypodermically, in time to meet the next exacerbation. At half past three o'clock P. M., I inserted one and a half grains of sulphate of quinia (made in solution with tartaric acid and boiled water), just at the insertion of the deltoid muscle. For an hour she was sleeping profoundly; skin moist; temperature 99° F.; pulse 100. She remained in this condition for fourteen hours (except when aroused to take food) past the time for both the evening and morning exacerbations—profoundly cinchonized.

I had intended to administer another dose during the night, but finding her so thoroughly under the influence, I did not think it necessary. Fearing another rise of fever during the evening, I introduced another dose of one grain under the skin in the other arm, with like good effect.

The child never had another rise of fever, and in five days was well. There was no abscess and scarcely any redness or tenderness from the injection.

I think this case especially interesting, inasmuch as it shows that even in a child so young, quinine may be administered hypodermically with impunity if tartaric acid is used as the solvent. I have found that it is oftener with children that quinine will not be retained by the stomach, or not assimilated, than with adults. I can call to mind two cases,

particularly sad to me, that I believe would have been saved could they have once been brought thoroughly under the influence of this agent; but both died.

Another point of interest is that, after once getting the patient under the influence of the drug, the secretions became unlocked, and the liver, which had not performed its function properly for a week, commenced to secrete healthy bile. The digestion improved, and in a short time the actions from the bowels assumed a healthy appearance.

Treatment of Fracture of the Neck of the Femur with Smith's Anterior Splint. By HARVEY BLACK, M. D., Ex-President Medical Society of Virginia, Late Medical Superintendent Eastern [Va.] Lunatic Asylum, etc., Blacksburg, Va.

In the April number, 1880, of the *Medical Monthly*, I reported a case of fracture of the neck of the femur successfully treated by the use of Smith's anterior splint. The following case treated in the same manner tends to confirm my opinion of the advantages of this method of treatment over those advised in surgical works, in affording greater comfort and convenience to the patient, demanding less time and attention from the attending physician, and with the promise of as good, if not better, results.

On the night of the 17th of October, 1881, Mr. J. R. C., aged 24, a member of the Wise Light Infantry, of Williamsburg, Va., in attempting to jump from a box-car, caught his foot in some way and fell, probably striking his hip on a railroad tie. He was carried to a house near by and examined by several physicians—all of whom diagnosed fracture of the neck of the femur. The symptoms were shortening to the extent of three-fourths of an inch, eversion, undue mobility, and severe pain about the hip-joint when the limb was moved. After removing him to his room, I applied Smith's anterior splint, which was worn for four weeks. The limb was then placed on pillows for three weeks, after which he was allowed to sit up for a few days, and then to use crutches. When I saw him last (about five months after the injury), aside from a feeling of a little stiffness and weakness at the hip, which caused a slight limp, the use of the limb was perfect. There was no perceptible shortening, and the result was in every respect satisfactory.

Finding some little trouble in keeping the bandages about the foot and leg properly adjusted, I adopted a little device which may be worth mentioning. It was to take a stocking long enough to reach from the knee to the foot, cut it open in front to within about two inches of the toe, bind the edges with cotton cloth, pass through the binding on each side a piece of strong wire (I used the steel ribs of an old umbrella), make eyelet holes about an inch apart beneath the wires, and with cords fasten this to the splint. The leg and foot rested comfortably in the stocking thus arranged, and the further adjustment of bandages was avoided. I might have substituted a similar contrivance for the bandages on the thigh.

Original Translations.

From the French and German. By WILLIAM C. DABNEY, M. D.,
Charlottesville, Va.

Cæsarean Section by Porro's Method.—A case of interest in itself and giving rise to very interesting remarks, was reported to the Société de Chirurgie by M. Guichard on the 10th of May last. The patient's pelvis was so much deformed that natural labor was impossible, and it was necessary that the Cæsarean operation in some form should be resorted to. Porro's method was employed and the operation was done May 22d, 1880, under chloroform, "and with all the ordinary precautions of the antiseptic method." The incision in the middle line of the uterus did not cause much discharge of blood, but there was a very copious discharge of amniotic fluid. A male child was extracted, which was living at the time of the report, nearly a year after the operation. After the removal of the uterus, the stump was brought to the lower end of the incision and mopped over with solution of perchloride of iron. Lister's dressing was applied. In the afternoon there was some hæmorrhage from the pedicle, which was checked by a caoutchouc ligature. The patient was given brandy, beef-tea and milk. The next day (May 23d) passed without accident, but on the 24th the abdomen became tympanitic, then dyspnœa came on and was followed by coma; the pulse was 140, the tongue dry; the temperature is not mentioned. Capillary punctures were made in order to evacuate the intestinal gases. Death occurred in the afternoon of the same day, May 24th, from suffocation. At the autopsy no trace of peritonitis was discoverable.

The report was referred to a committee consisting of M. M. Gueniot, Palaillon and Lucas-Championniere, and on May 17th there was an interesting discussion of the case.

M. Lucas-Championniere, while approving the practice of M. Guichard in this case, stated that after performing Porro's operation four times himself and seeing it done on two or three other occasions, he believed the method to be beset with dangers. Especially, he thought, were those reflex disturbances affecting the circulation and respiration, which caused no pain during life, and gave no signs at the autopsy to be apprehended. If the patient recovered, which was rare, the abdomen remained tender, the menstrual flow occurred by the rectum, and congestions of various internal organs were likely to remain and give trouble. He thought that in the great majority of cases the simple Caesarean section was greatly to be preferred to Porro's method. When the latter was from any cause to be preferred, he advised the following precautions: (1) Make the abdominal incision as far as possible above the pubis; (2) Open the uterus at its upper part and remove as small a part of it as possible; (3) Divide up the enormous pedicle; (4) Postpone as long as possible the first dressing, so as not to disturb the pedicle; (5) Use Lister's dressing.

M. Auger said that there were certain points in M. Guichard's case suggestive of carbolic poisoning, such as the dyspnoea, rapid pulse, profuse sweats, black urine, etc.

M. Palaillon said that, on the contrary, in carbolic poisoning the pulse is slow, the respiration also slow, the temperature lowered and the vital forces depressed. He agreed with M. Lucas-Championniere that the reflex troubles were the chief sources of danger in Porro's operation, and stated that he had observed these phenomena in three cases of hysteriotomy followed by death. Death came in these cases without peritonitis, from simple exhaustion of the nervous system. As to the operation itself, the great difficulty consisted in checking completely the flow of blood from the remnant of the uterus.

M. Auger stated in this connection that in one case of hysteriotomy occurring in his practice, in spite of the division of the pedicle and its ligature in different pieces (and not *en masse*) death occurred from hæmorrhage.

M. Marchant had made a resection of the uterus in one urgent case with Chassaignac's *ecraseur*; there was no hæmorrhage, but death occurred the same day from *peritonitis* [?]

M. Lucas-Championniere said that about a third of the Porro operations had been done with the *ecraseur*.

Pilocarpin in Puerperal Eclampsia.—In a recent number of *Le Progress Médical*, there appeared a paper on this subject by Bricon, in which the whole matter is carefully reviewed and a table is given showing details of twenty-four cases where this treatment was resorted to. The conclusions at which he arrived agree in the main with the opinion generally entertained at present, namely, that while pilocarpin is capable of doing much good in puerperal eclampsia, especially in the milder cases of the disease, its use in those cases where the patient is comatose, is attended with serious risk of suffocation from the profuse salivation.

The table which he gives, and indeed the whole article, shows great labor and research, and is well worthy of careful study.

The twenty-four cases reported are considered with reference to the following points: (1) Age; (2) Whether primipara or multipara; (3) Stage of pregnancy; (4) Analysis of the urine; (5) Commencement and course of the attack; (6) Mode of administration and dose of jaborandi or pilocarpin; (7) Date of accouchement and termination; (8) Simultaneous treatment; (9) Results; (10) Observations.

I shall endeavor to give a summary of the most important results of the investigation. Of the 24 cases, 17 were primipara and 9 multipara. In 2 the number of labors are not mentioned. Of the 17 primipara, 5 died; of the 5 multipara, 3 died.

In only four cases was pilocarpin *alone* used. Two of these four resulted fatally, death occurring in one case one hour and forty minutes after the first injection, from pulmonary oedema, the patient being comatose at the time of the injection. In the other case, also, death was caused by pulmonary oedema, the first attack occurring two hours after the administration of jaborandi. In 9 of the 24 cases, chloroform was used in addition to the pilocarpin; and in all these cases either blood-letting was resorted to (in 5 cases), or morphine, calomel, digitalis or hydrate of chloral were used. Of the 9 cases in which chloroform was used, 3 terminated fatally. While of the 5 cases in which blood-letting was resorted to in addition to chloroform and pilocarpin, but 1 terminated fatally. This measure was resorted to in 3 other cases also, in which no chloroform was given, but in 2 of which chloral was administered. All these cases terminated favorably, but it is expressly stated in several cases that all the agents had been faithfully tried before pilocarpin was resorted to, and had proved useless.

The most important question in connection with the administration of pilocarpin in puerperal eclampsia, is the *time* at which it may be given with most hope of success. So important does this point seem to me, that it is a matter of surprise that Bricon does not pay more attention to it. In only one case does he mention the administration of jaborandi prior to the convulsive attacks, yet it certainly seems reasonable to suppose that it would be far better to administer the medicine *before* the eclamptic attacks, and so soon as it was evident that they were threatening. While the results in these cases are highly satisfactory, it is not unlikely that they might have been made better had the remedy been employed earlier. In five of the fatal cases, death is attributed to pulmonary œdema, and in one to central œdema; and it is reasonable to suppose that the jaborandi would have exerted a very favorable influence in these cases, not only by withdrawing the poisonous principles retained in the system, but to a still greater extent by the increased discharge of fluid itself.

[There is another point of interest in connection with the use of jaborandi which has not as yet been sufficiently investigated, namely, whether it may produce premature delivery. Bricon's paper throws no light on this point, but the subject has been suggested to me by a case seen with Dr. R. W. Wilson, of Charlottesville, Va., in November, 1879. A multipara, seven months pregnant, was suffering with violent headache, blindness, numbness in the extremities, etc. Her urine contained albumen in large quantity, and also a number of casts. Both Dr. Wilson and I considered the prognosis very unfavorable, but jaborandi in infusion (thirty-five grains) was resorted to. The dose was administered on Thursday at noon, and caused a profuse flow of perspiration and saliva. On Friday she felt much better, so far as the nervous symptoms were concerned, but had some slight uterine pains, and on Saturday afternoon they became much more active, and she was delivered of a dead child about 8 o'clock that night, without having any further eclamptic symptoms. Two days later her urine was entirely free from casts and albumen.—W. C. D.]

Forced Alimentation of Phthisical and Hysterical Patients.—This subject, which attracted so much attention in Paris during the past winter, was again discussed at a meeting of the Société Médicale des Hopitaux on April 14th. We take the following report from *Le Practicien* of May 1st:

M. Dujardin-Beaumets opened the discussion by saying

that in a recent visit to the Bicêtre, he had observed that the phthisical patients subject to forced alimentation by M. Debore with the tube of Faucher, improved much more rapidly than those which he had himself treated in a similar manner. Adopting the plan of M. Debore, he now pumped into his patients (if the expression might be allowed), not only eggs and meat juice, but grated meat, also, mixed with milk. The results of this modification of his former plan had been most satisfactory, and his patients had rapidly improved. He had injected in some cases as much as 200 grammes of powdered meat a day (mixed with milk), and the results had been "marvellous;" the assimilation seemed to be perfect and showed itself by a rapid increase in flesh.

In four cases also of intractable vomiting in hysterical patients, M. Dujardin-Beaumetz had seen food given in this way readily retained when it was instantly rejected otherwise.

M. Debore said that since his first communication on the subject many of his professional friends had witnessed the good results obtained in a considerable number of cases. The night sweats had entirely disappeared; the expectoration was greatly diminished, and the patients had increased rapidly in weight. In one person who had improved rapidly under this treatment, and who died from an intercurrent affection, there were found at the autopsy large caverns in the upper part of both lungs, and on their walls were a number of healthy granulations identical with those of a wound in process of healing. He thought in order to obtain good results and to regain lost ground in phthisical cases, it was necessary to administer quantities of food which seemed almost fabulous. He had gradually increased the amount till some of his patients were now taking during the day three litres of milk, six hundred grammes of powdered meat, twelve raw eggs and a certain amount of farinaceous food. The meat being in a powdered state rendered it, in his opinion, much more easy of digestion. Six hundred grammes of powdered meat represents about 4.8 pounds of fresh meat. The proof of the ready assimilation of food administered by the tube of Faucher was to be found in the entire absence of diarrhœa, the small quantity of fæcal matter discharged, the rapid increase in the weight of the body, and the considerable increase in the amount of urea excreted per day, which in one case amounted to seventy grammes.

M. Joffrey stated that in a case of hysterical vomiting of recent date, he had obtained complete and speedy relief by

forced alimentation, and he said it was just in this class of cases that he thought the treatment would do the most good; in the old cases which had run on for months or years, he feared nothing could be found to give the desired relief.

M. Guyot had tried forced alimentation without success in the case of a hysterical girl, who died of inanition after intractable vomiting, extending over a period of eighty-two days.

M. Joffrey said it was necessary to take account of the nervous element in many of these cases, and he mentioned one case in which the food given by Faucher's tube was always vomited unless given by a certain interne.

M. Debon agreed with M. Joffrey that it was in the earlier stages of hysterical vomiting that forced alimentation was likely to prove serviceable. In the latter stages, when the inanition itself augmented the intolerance of the stomach, it was far more difficult to manage, and he had himself seen two hysterical patients literally die of starvation.

M. Dujardin-Beaumetz said his cases had all been in the first stage, though in one the vomiting had lasted for three months, but there was no suppression of urine and the vomiting was not an effort of the stomach to perform the functions of the bladder.

The Treatment of Syphilis by Means of Hypodermic Injections of Iodoform.—At the meeting of the "K. k. Gesellschoft der Aerzte" on April 28th last, Prof. Neumann read a paper on this subject. (*Allg. Wiener Med. Zeitung*, May 2, 1882.) He alluded to the fact that so long ago as 1870, Bozzi had proposed to treat syphilitic neuralgia by means of hypodermic injections of iodoform, but the suggestion seems to have been overlooked till in 1881 Thomann published a short paper on the subject.

The solution employed by Neumann consisted of one part of iodoform and twenty parts of olive oil. Thomann's solution was made more concentrated.

Very soon after the injections were commenced, it was found that they gave rise to considerable local inflammation; and subsequent investigations on animals showed that in dogs only about 4 per cent. of the iodoform was absorbed, the rest remained in the subcutaneous connective tissue. Besides the knowledge gained from experiments on dogs, however, an opportunity occurred of examining the body of a patient in whom these injections had been used, and who died of an intercurrent pleuro-pneumonia. A careful investigation of this case satisfied Weumann that only about 4

per cent. of the iodoform had been absorbed here, the rest being retained in a crystalline form in the subcutaneous tissue. This fact suggested the plan of injecting the iodoform near the places at which the syphilitic trouble manifested itself, in order to obtain its effect just at this point. It will be remembered that Weisflog recommended mercurial injections in the neighborhood of enlarged glands in syphilis with a similar view.

Investigations were made by Neumann, whose opportunities for investigating any matter connected with syphilis are exceptionally good on this point, and he found that syphilitic glands were greatly diminished and improved by this course of treatment.

With reference to the syphilitic eruptions he found that the macular syphilides were made more tractable than the papular. In the former, about forty injections were necessary before the patient was cured; in the latter, about eighty. In syphilitic iritis, no good was done by the hypodermic use of iodoform. With respect to the rapidity with which they produce their effects, these injections rank below the mercurial salts, and they are only to be advised when the physician finds the latter to be contra-indicated from any cause, or when the patient refuses to submit to the mercurial treatment.

Analyses, Selections, etc.

Statistics and Memoranda about Insane in the United States.—Dr. C. L. Dana, Professor of Physiology in the Woman's Medical College of New York city, etc., has a very interesting and suggestive article in the *Journal of Mental and Nervous Diseases* for April, 1882, on the subject epitomized by the above caption. He has obtained recent reports from nearly every lunatic asylum in the United States, as also a number of recent State documents. He has, in addition, had a large correspondence, as well as conversations, with many of the profession especially interested in the subject of psychiatry.

The census statistics of the United States have several sources of error which cannot be entirely eliminated. Dr. Dana, however, presents a table showing that, in 1880, we had, in round numbers, about 90,000 insane, which gives a ratio of about one to every 520 of the population of this country. The census ratio in 1860 was one insane person

for 1310; in 1870, it was one to every 1,100; in 1875, it was one to every 953. Our population from 1870 to 1880 increased about 26 per cent, while our insane population apparently increased over 100 per cent. But this ratio is very much less than that of many European countries; for example, in England it is not far from one to 350. Again this apparent increase in the United States is very largely due to the fact that the insane are being accumulated in asylums, and also to the fact that the census of 1870 was extremely imperfect as regards the insane.

As regards the distribution of insanity and its increase, the proportion of insane is greatest in New England, where the ratio is one to 357 of the population; but the rate of increase there is undoubtedly becoming slower. The Middle States have a proportion of one to 446; the Western States, one to 570; the Southern States, one to 780. In rapidity of increase, the Western States come first, and then the Southern States.

As regard asylum accommodations, there were, according to Dr. J. S. Conrad, in 1875, 62 active State insane asylums, with a capacity of 24,252 patients. These were actually holding 27,000 patients. In 1881, there were 74 State and 14 large private asylums, with a capacity for about 31,000, but in reality holding 39,145 patients. At a very low estimate, therefore, our asylums are overcrowded to the extent of 10,000 patients, while there are about 50,000 insane persons not in any asylums at all.

Our State Legislatures must expect that before many years the New England and Middle States will have an insanity ratio of at least one to 350; the Western States, one to 400 or 500; the Southern States, one to 500 or 600. They must provide good asylum accommodation for three-fourths of these, if they would do what England does for her insane.

We have about \$40,000,000 invested in insane asylums, at an average cost of over half a million apiece. It takes about \$8,000,000 a year to run them, or \$82,000 a year for each institution—not including interest. The annual cost per patient has been variously estimated at from \$166 to \$316. Of the fifty hospitals tabulated with their *per capita* expense, we find that the annual cost per patient is cheapest in the West Virginia Hospital for the Insane, at Weston, where it is \$115.95. The next cheapest hospital is the Western Lunatic Asylum, at Staunton, Va. (\$141.84 per capita). The next cheapest is the Eastern Lunatic Asylum, at Williamsburg, Va. (\$148.94 per capita). The expense at the Central [Va.]

Lunatic Asylum, near Richmond, is \$171.23 per capita. The State Homœopathic Asylum, at Middletown, N. Y., has a per capita annual expense of \$332.80—the highest in the entire list.

As to the needs of our asylums, first of all is the want of more room. The condition in some of the Southern States is particularly distressing. In South Carolina, hardly one-third of the insane can be cared for in the single State hospital. In Georgia, 50 applicants were turned away in 1879. The same was the case in Mississippi, where the law is so framed that chronic cases cannot be discharged to make way for the acute. Florida has only an apology for an asylum building. Arkansas, with nearly a million of population, has no asylum whatever, though one is now in process of erection. The Superintendent of the single Texas asylum (which holds only one-fifth of the State insane) has been obliged to use a printed letter of rejection, because surplus applicants for admission are so numerous. It is true that there are fewer insane proportionately in the South, partly because of the preponderance of the colored race, who are, it is said, not so subject to insanity. Religion is said to be the chief cause of insanity among the Southern negroes, and it is a form of the disease very hard to cure. In the West, the story is much the same as that about the South.

Many of the non-asylum insane in the South and West are kept in jails, almshouses, or on poor-farms, etc. By this process, the curable insane are often made incurable and a permanent expense to society.

Hygiene of the Sexual Function.—Dr. Chas. Fayette Taylor, of New York, in the *American Journal of Obstetrics*, January, 1882, discusses this subject in an able manner. After a consideration of the effects of civilization on woman—her efforts stimulated and her ambitions excited, yet her opportunities restricted—he then proceeds very fully to treat of the sexual function and sexual desire in the female, which Dr. Taylor considers far greater than is usually represented. Indeed, he deems these more exalted in the female than the male; usually masked by social requirements, but often in existence unappreciated by the woman herself. He concludes his paper as follows, which is the practical hygienic feature, and which we commend to our readers for its importance.

Says Dr. Taylor: "I have already said enough to arrive at the conclusion that the sexual function cannot be ignored. It is not a matter of indifference whether a woman lives a

single or married life. On the contrary, as many women cannot marry, and others ought not to marry, how women can live in health and comfort, while avoiding the pains and perils of married life, is a matter of deep concern, and should engage the earnest thought of all who are interested in the well-being of the race. That the normal condition of a woman is to be married and be the mother of children, there can be no doubt; also, that she is liable to some nervous strain when her generative organs are not employed. I do not for one moment wish to be understood as believing that an unmarried woman cannot exist in perfect health, for I know she can. But the point is, *she must take pains for it*. She must, in fact, work for it. The sooner women come to know that it is not all, whether they marry or not, the sooner will they begin to adjust themselves to the necessities which Nature places on them. And the first truth to learn is this, that the use of the generative function is a physiological demand. It follows that, when the organs provided for reproduction are not employed, some other demand for the suspended energies, which shall effect a vicarious relief to the unemployed functions, must be established. Accumulated force must find an outlet, or disturbance first, and weakness ultimately results.

“And this outlet we find perfectly effective in well exercised muscles. If an unmarried woman desires to escape from the perturbing influence of unused generative organs, she must vigorously use her muscles. There is nothing, in my opinion, which is equal to daily use of the muscles to actual weariness, as an equipoise to the generative demands. And I am confident that a good degree of muscular effort, daily resorted to, will be perfectly effectual in saving married women from a multitude of evils to which their present modes of life subject them. But it must be real muscular action, and not vain excuses for it. And the value of muscular action, as a relief to our over-laden nervous system, implies more interest in practical matters, and the avoidance of much of those æsthetic and emotion producing occupations which seem to be about the only things that civilized women crave. The evil mental influences begin in childhood, in the constant stimulation of the emotions, in society and in domestic life, as well as in most of the methods of education for girls. Let education be more practical, and not carried beyond a girl's physical and mental capacity. And let things be learned for their own sake, and not merely as a means of exciting some emotion. And, above all, let women know

more about themselves. * * * In a word, *knowledge* and *labor* are the twin remedies for naturalizing the evils connected with the health of a single woman in civilization, and there is nothing, which rightly known, is not modest, elevating and promotive of virtue. When the day arrives when women shall understand the requirements of all their functions, so that they will know how to adjust themselves to whatever situation in life they may be placed, and, when unmarried women, young or middle aged, shall clearly see that, to be well in body or mind, they must do something, day by day, and every day, that is in the nature of effective bodily effort as a counterpoise to sexual inaction, they will be healthy and strong. Then, and not till then, can it truthfully be said that civilization is not hard on women."—*Cincinnati Obstetric Gazette*, as copied in the *San Francisco Western Lancet*, June, 1882.

Lithotrity with Evacuation.—Prof. Henry J. Bigelow, of Boston, was gracefully introduced, to the New York Academy of Medicine by the Chair. He could not forget that it was in New York that the procedure which he had labored to perfect had received its first distinct approbation, and that at a time when it needed friends. The profession here had then tested the matter by practical experiments, and he could not refrain from mentioning his special obligation, among others, to the distinguished Professor Van Buren for his interest and assistance in it.

The subject was one relating distinctly to operative surgery, a mechanical one, and it was to the mechanical part of it—a mere matter of physics—that whatever advances had been made in lithotrity of late were really due. He should confine himself, therefore, to the mechanical procedure. There were a number of points in regard to which he would like to have an expression of opinion from some of the gentlemen present. Any common lithotrite would break a stone, and most evacuators will remove it; but it was an important question which special instrument would do it best. Although it was stated, during the noted discussions which took place in London, in 1878, by Sir James Paget and other authorities that the subject of lithotrity had apparently gone as far as it could, and that the operation would probably not be further improved, yet since that time all the lithotritists had been steadily at work, and distinct advances had been made. It was desirable at the present day to use instruments materially different from those formerly in use, al-

though the whole question was still one of breaking up a stone, and getting the fragments out through the urethra, an operation that had been in vogue for many years.

When Civiale commenced to operate he required from twenty to thirty minutes, but he gradually reduced the time as he improved his instruments to three or four minutes, a limit to the sitting generally accepted and taught since Civiale's day.

The means for removing the fragments completely, however, did not formerly exist. The sharp fragments remained in the bladder, and did the damage—not the operation. When it came to be possible to remove them, it was found, to the surprise of everybody, that the bladder was a very tolerant organ. That this tolerance of the bladder had never been suspected up to that time, and the fact that such an error had existed for half a century seemed to show the advantage of doubting everything in medicine of which we had had no personal experience. The single agent to which actual progress was due was the large catheter which held the urethra open while the fragments were drawn out through it, and it was a fact that the small catheter of Clover's instrument had retarded progress for a very long time. Long ago, in 1846, Sir Philip Crampton had drawn out a large quantity of dust in the form of powder by means of a vacuum made in glass. If fragments were completely pulverized, of course a small catheter would answer for the whole calculus, but the bladder could not afford to wait to accomplish this.

A large catheter by itself was not a new device, since it had been in use in former times to some extent. Collin's instrument had a catheter of number twenty-five or twenty-six, but it was found to be inefficient, and was soon pronounced an impracticable failure. The distinctly new and important point in the instrument now employed was the use of a large catheter (of from twenty-five to thirty-one) in combination with an efficient suction. This constituted the novelty of the thing. Having, then, the large catheter, the first question was, should it be straight or curved? This was a matter concerning simply the introduction of the instrument, and Dr. Bigelow said that he preferred a straight catheter, since he found it generally easier to pass this than a curved one. As most of the passage was practically straight, a straight tube could be introduced with greater facility than a curved one. The question of straight or curved was, then, simply one of convenience, and was re-

lated to the habit of the operator and sometimes to the individual case.

The character of the extremity of the catheter which he preferred was oblique and blunted, and had a projecting lip of considerable length below, while the orifice was above. The orifice should be about the size of the calibre of the interior of the tube; for if it were larger than this a fragment was liable to become lodged there; and in this connection he mentioned a death that had occurred in consequence of the orifice of the catheter employed being disproportionately large. A fragment thus became fixed, and as a result of the laceration of the urethra occasioned by it, the patient died of septicæmia. It was also recommended that the tube-wall, above the orifice, should be thickened, so that no injury might be inflicted by its edge.

The next point involved the important matter of retaining the fragments when they had been once gotten out from the bladder. It was a curious fact that until now all evacuator, so far as he knew, returned to the bladder something like from one-third to one-half of all fragments withdrawn. This had been attributed to the length of the elastic tube sometimes employed; but the length of the tube was not the main difficulty. As a fact, it was found on investigation that the fragments were really returned from the bulb, and that a little additional prolongation of the tube made very little difference. Nevertheless he had tried to devise a trap at the extremity of the tube. One consisted of a little glass cylinder containing a valve in the shape of a loose rubber ball, which worked backward and forward, and thus closed and opened the orifice alternately, while the water returned through a strainer. This device he had found to work very well, but as the objection had been made against it that it was too complicated an arrangement, he had afterwards employed a simpler one, which also acted perfectly, and which he had not as yet published. This was nothing more nor less than a half an inch of cotton tube fastened at the end of the metal tube in such a way that it acted as a valve in closing and opening the orifice. Still, as even this might be thought by some surgeons a little complicated, he had tried quite a variety of other valves. One objection to a metal valve was that it was too liable to become obstructed by fragments. Consequently he had been obliged to resort to still other expedients, to which he would recur in a moment.

He would now go a step further, and speak of the evacuator as a whole. We are to dispose by means of it of air,

water and fragments. The receptacle for the fragments might be placed either between the catheter and the bulb or below the bulb itself. For his own part, Dr. Bigelow considered it better to place the receptacle immediately below the bulb, especially for the reason that it materially shortened the instrument, and this of itself was a very important advantage. It was also an important matter to place the axis of the bulb in a line with the axis of the catheter. Otherwise there would be a leverage causing the instrument to work at great disadvantage. The moment the bulb and receptacle were combined in one piece the question arose whether or not the catheter should be detached by an elastic tube to allow its freer motion. The ordinary straight elastic tube was liable to double on itself, and thus prevent the free flow of water; but a curved tube of proper construction was not open to this objection. In regard to the use of a stand, Dr. Bigelow said that his preferences had been in favor of it. Perhaps his present opinion might be best expressed in this way: If the stone were a small one, and the operation short, it was better to dispense with the stand; but if it were large, the stand was a considerable help, since the two or three pounds' weight of the instrument made quite a difference to the operator if it had to be supported by the hand. Still, the general belief in such matters was often the correct one, and the prevailing practice, which was opposed to the use of the stand, he was willing to adopt.

Dr. Bigelow then exhibited the first instrument which he employed, and remarked, in connection with it, that it made no sort of difference at what point the catheter entered the bulb, provided it did not finally deliver directly at the top, where the air collects. If the tube penetrated even for a short distance into the bulb, from the above, an air chamber was formed by this means at once. The only air that belonged legitimately in the bulb was that which came from the catheter, and the amount of air varied with the capacity of the catheter. The best rule was to have the catheter deliver as near the centre of the bulb as possible; and when this was the case, the greatest possible facility was afforded for the uninterrupted passage of the fragments into the receptacle below. If the tube entered the lower narrow part of the bulb where the fragments accumulated, it was important that it should be prolonged above this point, or else they would be returned in great quantity to the bladder. This brought him to the point of showing how regurgitation of the fragments from the bulb took place in almost all instru-

ments. He then exhibited one which he said had been abandoned by its author, beneath the bulb of which he had attached a short glass tube, so that the course of the currents might be observed. It was clearly demonstrated that a considerable portion of the fragments went directly back into the bladder. How, then, it might be asked, was evacuation ever accomplished by such an instrument? Simply by washing the fragments backward and forward between the bladder and the instrument until all of them had been finally dropped into the receptacle. This has been, till now, a serious defect of many evacuators. There is in this instrument also a current, which actually lifts the fragments out of the glass receptacle, and sends them back to the bladder. In other words, the general fact held good, that wherever the water goes into an evacuator, the fragments go also, unless they are prevented by means of a strainer.

Dr. Bigelow next exhibited the latest instrument devised by Weiss, of London, which he had received during the past winter, and remarked that the first difficulty about it was that, as in Clover's evacuator, the bulb was not stiff enough. In his own instruments, a special point was made of having the bulb sufficiently stiff. A second difficulty was that the fragments, following as usual the course of the current, some of them collected in the bulb, and were thence carried back into the bladder. Dr. Bigelow next exhibited another of his own instruments with a valve, which he had once published, and which worked perfectly well, although it was not as simple in construction as was desirable. It was provided with a stand. He had often felt it a relief to stop once in a while in a long operation to see how things were going on, which the self-supporting character of the instrument enabled one to do with ease. With regard to the rubber hose which was attached to the top of the bulb and provided with a stop-cock, he regarded the device as a great advantage, and he had continued to employ it in all his evacuators up to the present time. Its purpose was not only to dispose of the air, but especially to add or remove water. As had been stated, the only air legitimately held in the bulb was that contained in the catheter. If it were wished to get rid of even this amount of air, it could be promptly accomplished by compressing the bulb and filling its place with water by means of the hose. Another point in connection with the latter was, that all bladders were not of the same size or the same elasticity. In a small bladder it was difficult to evacuate completely, because the walls were liable to fall against the

catheter. This was because there was not enough water in the bladder. It could be easily added by means of the hose; the quantity of water could be thus graduated exactly according to the desire of the operator. Sometimes during the operation the patient strained or vomited, so that everything became very tense; and in that case we had only to open both stop-cocks and deliver the water temporarily. He believed, therefore, that the hose was a valuable addition, both for the purpose of getting rid of air and of regulating the amount of water according to the circumstances arising from time to time during the operation.

Finally, Dr. Bigelow exhibited the new and simple instrument which he had now settled down upon, and which could be used with either a single stop-cock or with two, as might be preferred. In the first place, it had a spherical bulb acting as a handle in the axis of the catheter. In the second place, it is quite short from end to end. In the third place, the obliquity of the tube carried the receptacle high in the air, one advantage of which was that it was nearer the level of the eye of the surgeon. In the fourth place, the whole thing fitted well into the cavity of the hand which held it. In regard to the use of stop-cocks, he preferred to have two instead of a single one. He then gave a demonstration of its manner of working, and after a moment or two, it was found that there was not a fragment left remaining in the glass vessel used to represent the bladder. The simple method by which this desirable result was accomplished, could be readily understood. There was a cylindrical strainer that prolonged the catheter inside the bulb, and inasmuch as all strainers may get clogged with fibrin, resulting from the inflamed state of the bladder, it was so arranged that it could be readily removed for the purpose of brushing it. It could be replaced in an instant; so that very little time was consumed in this way. The fragments enter the bulb from the bladder through the main orifice, by reason of the momentum which the current has acquired in coming from the bladder. But the combined area of the small apertures along the tube being much larger than that of the principle orifice at its extremity, most of the water returns by these apertures, and is strained.

Dr. Bigelow then spoke briefly in regard to the lithotrite. He stated that the most convenient instrument of any sort was that which was best adapted to the movements of the hand. In devising his own instrument, therefore, he had first considered which was the easiest motion of the latter,

and had arrived at the conclusion that this was its rotation. He had, therefore, not only made the handle of a size adapted to that of the hand, but in such a way that it could be worked by rotation. He had also provided it with a lock by means of which any position of the blades could be maintained as long as desired; so that it was not necessary to change the position of the hand. The blades were made at as near a right angle as would admit of their introduction into the bladder with convenience and safety, and thus are found to work at a much greater advantage than the more oblique blades formerly sometimes employed. As the greatest impaction always took place at the heel of the instrument he had abandoned the idea of crushing much at this point, and passed a flange through it, in order to bisect the detritus and discharge it laterally. The crushing was mainly done in front of the heel. When the patient was in good health, he believed that the safety of the procedure depended simply upon the surgeon's skill, and that if proper care was observed there would very rarely be any bad results with the facilities now at our command. In cases where the kidneys were affected, however, the same favorable results were not, of course, always to be anticipated.—*Boston Medical and Surgical Journal*.

The Influence of Sexual Excitement Upon Wounds.—In a paper recently published in the *Lyon Medical*, M. Poncet draws attention to the evil effects of sexual intercourse when indulged in during convalescence from injuries, operations, etc., and suggests that this may be a not very unfrequent although unrecognized cause of some of the mishaps and complications that occur in private practice. The sexual act that produces a certain amount of shock, which M. Poncet thinks may be placed side by side with traumatic shock, and which leaves the patient for a certain time after indulgence in a condition of "least resistance," during which he is susceptible to morbid influence. With regard to the impression produced even in health by the act of coitus, some thermometrical experiments undertaken by an interne of the Lyon Hospital are quoted. A thermometer placed in the rectum was carefully observed on nine occasions, and it was found that the temperature was always from five tenths to six tenths of a degree Centigrade (nearly 1° F.) lower just after than before coitus. During the act the temperature rose slightly above normal.

In illustration of his views M. Poncet gives notes of seven

cases observed in his own practice, where complications were ascertained to have followed coitus. Four of these patients had lesions of the hand or finger, and all were going well up to the time of sexual indulgence, which was quickly followed by pain and swelling of the injured part in one case, and in three others by inflammation of the lymphatics, which went on to suppuration in two. In another case chronic tetanus was attributed to the disturbing effects of coitus and yet in another the non union of a fracture. In the latter case union took place when the man was removed from his mistress who had been nursing him. In the seventh case pyemia and death are referred to a similar cause. The patient had undergone amputation for an injury, and was in the country away from any known septic influences. The wound was healthy and granulating, when on the eighteenth day after the operation he had intercourse. Rigors quickly followed, and death occurred five days later. A somewhat similar case is mentioned on the authority of Ollier. Though these cases are all surgical, M. Poncet also refers to the adverse influence of sexual excitement in some other diseases, notably diabetes and gout.—*British Medical Journal—St.-Louis Med. and Surg. Jour.*, July, 1882.

The Ergotine Treatment of Uterine Tumors.—In the July number of the "New York Medical Journal and Obstetrical Review" Dr. William T. Lusk, Professor of Obstetrics in Bellevue Hospital Medical College, relates a case of fibromyoma of the uterus in which ergotine injections into the subcutaneous tissue of the abdominal wall over the tumor, not into the tumor, resulted in a rapid diminution in the bulk of the growth, at the expense, however, of gangrene of the compressed tumor, ending in the fatal septicæmia.

Warm and Hot Springs.—Are found in all latitudes, at various elevations above the sea, and in most of the geological formations. The word *thermal* does not, however, denote a spring of any particular degree of temperature, for any spring is thermal, the water of which is warmer than the mean annual temperature of the place where it occurs. In the equatorial regions, where the mean annual temperature is about 80°, a thermal spring should have a temperature of about 85°, while in the northern parts of the earth, as, for example, at Yakutsk, in Siberia, where the year's temperature does not exceed 13°, it need be only a little above that. The waters of thermal springs maintain an equable temperature,

and must therefore come out of the depths in the earth at which the variations in the temperature of the air exert no influence. According to Boussingault, this depth in the tropics is only a little more than one or two feet, but between 48° and 52° of north latitude it is between sixty-six and ninety-three feet below the surface. Besides the springs that are called thermal, many springs are found the temperature of which exceeds the highest mean temperature of the year, and are called warm springs. Examples are the spring at Carlsbad, 167° ; that of Wiesbaden, 158° ; those of Baden-Baden, 154° to 111° , etc. The depth from which the waters come may be approximately calculated by the rule that the temperature increases one degree for every ninety feet below the surface. Hence the water of the bubbling spring at Carlsbad is supposed to come from a depth of seven thousand three hundred feet.

A third class of springs, the boiling springs, geysers, or hot springs, whose temperature is near the boiling-point of water, are peculiar in respect to the places where they appear. They are found only in volcanic regions; are numerous in Iceland, where there are more than a hundred of them; on the North Island of New Zealand, where they are most abundant in the neighborhood of the Roto Mahana, or Hot Lake; and near the Yellowstone Lake, the Fire-hole and the Madison Rivers, in the region of the Wind River Mountains, in the United States, where some eight hundred are grouped within a certain well-defined area.—Dr. OTTO WALTERHÖFER, in "*The Mechanics of Intermittent Springs*," in *Popular Science Monthly* for July.

Chloroform is used in Berlin to the exclusion of ether. I saw a case upon which one of the Stadt physicians was operating, fractures of both thighs and laceration of one foot. The chloroform was given carefully, and by the time the dressing was finished, fully an hour, the man was almost lifeless. And from the negative sort of a way in which they went to work to revive him, I should judge that chloroform accidents were very rare. No attempt was made to elevate the extremities above the head, as Nelaton, and Professor Holmes, of Chicago, have shown is so necessary. After some two hours' work the man was considered out of immediate danger.

New Operation for the Relief of Glaucoma.—L. E. Lane, M. D., has ligated, and advises the ligation of the common carotid artery.—*Lancet and Clinic*.

Book Notices, &c.

Nouveau Dictionnaire de Médecine et de Chirurgie Pratiques, Illustré de Figures Intercolées dans la Texte. Directeur de la Révision. DR. JACCOUD. (Will be printed in thirty-six large 8vo. volumes of about 800 pages each.) Vols. I-X received. J. B. Baillière, et Fils., Paris.

The name of Jaccoud as editor of this immense work is a sufficient guarantee that it will be as nearly perfect as medical talent and laborious research can make it. But the names of some of his most prominent collaborateurs will set aside all doubts. We mention, among others, Benj. Auger, Berantz, P. Bert, Cusco, Delorme, Deprés, Dieulafoy, Fournier, T. Gallard, A. Guérin, A. Hardy, Kœberlé, Lannelongue, Lucas-Champonnière, Nélaton, Panas, M. Raynaud, Ricord, St. Germain, Germain Sée, Stoltz, Tarnier, Tardieu, A. Voisin. These are not one-third, but are sufficient to show what must be the character of the work.

It may be confidently asserted that no such work has ever been published in any language or upon any subject. It is not a dictionary of medicine, or surgery, or obstetrics, but a complete cyclopædia of the whole medical science, dealing with chemistry (medical), jurisprudence, physiology and anatomy as well as every department of general and special practice.

The third volume, for example, commencing with a masterly treatise on Aphasia, by Aug. Voisin, contains articles on: Asthma, by Germain Sée; Asphyxia, by Paul Bert; Occipito-atloid and Atloido-axoid regions, considered anatomically—topographical and surgical—physiologically and surgically, by Denucé; Ascites, by H. Gintrac; Apoplexy, by Jaccoud; Articulations, surgical anatomy, physiology, surgical pathology, contusions, wounds, dislocations, foreign bodies, etc., by Panas; Apparatus of every description, by Sarazin; Locomotor Ataxy, by Troussseau; the medico-legal aspect of Arsenic and Asphyxia, by Tardieu—perhaps the greatest medico-legal jurist—and many other articles.

The first volume contains about 100 pages on Natural Labor, with as fine plates as can be found anywhere—the anatomy of the female organs, and the after-treatment of labor not being here entered into.

The botanical plates strike us as being remarkably fine—almost all the plants from which drugs are obtained being depicted in an unmistakable manner.

Denucé, in his articles on the Abdomen, has apparently exhausted the subject. In the short compass of 130 pages he deals with the anatomy-description and surgical-development, physiology, anomalies, functional troubles, physical inspection, palpation and percussion, auscultation, contusions, wounds of every description, hernia, ruptures, fistulæ, etc., etc.

Langier, in his article on Abscesses, adopts the classification of Roux, dividing them into five great classes: (1) Idiopathic Abscesses; (2) Sympathetic; (3) Critical; (4) Symptomatic and (5) Constitutional Abscesses—these classes being further sub-divided.

The fact that the articles on Absorption and Accommodation are signed by P. Bert and Liebreich respectively, is evidence enough that they are written in a masterly manner.

One of the most valuable contributions to the second volume is an article on the Anus, including surgical anatomy and pathology, and the various diseases and unpleasant affections to which the anus is heir.

Malformations are divided into Anal imperforations and Rectal imperforations, each being sub-divided. Anal imperforations into (1) Complete; (2) Incomplete, and (3) Internal ano-rectal Atresia; and Rectal imperforation into (1) Complete Atresia; (2) Atresia communicating with the urinary organs; or (3) Atresia communicating with the vagina.

After an impartial consideration of the various methods of operating for artificial anus, the preference is given to Littré's operation.

Regarding *pruritus ani*, he says that it is due to hemorrhoids in some cases; more frequently to worms, and sometimes to what seems to be a particular dermalgia of that region. He recommends glycerole of alum, four parts; pulverized calomel, two parts, and glycerine, fifteen to twenty parts.

The third volume, containing a valuable article on "The Arteries," from the pen of Maurice Reynaud, of about eighty-five pages, is well illustrated with cuts, showing the manner in which collateral circulation is established after ligation. One of these plates is particularly worthy of mention. It is piece 237 of the Dupuytren Museum, an anatomical specimen, showing the collateral circulation after obliteration of the right common femoral. It deserves a place in Darling & Rauney's excellent anatomy as clearly verifying the statement there made, that in case of ligation of the femoral artery collateral circulation is established as follows: "The

external circumflex with three arteries—(1) Gluteal; (2) Iliolumbar (branches of the Internal Iliac), and (3) Circumflex Iliac (from the External Iliac); the Internal Circumflex with two arteries: (1) Obturator and (2) Sciatic (branches of the Internal Iliac).” Perforating arteries with one artery: Comes Nervi Ischiadici (from the Sciatic).

“White swelling” is most elaborately discussed by Panas in his article on “Articulations.”

In the fourth volume, Jules Simon concludes his discussion of *Progressive Muscular Atrophy* with the following from Remak:

1. At first the disease appears to be inflammatory in its nature, and leeches are indicated.

2. When the constant current cannot be employed, hot douches are to be recommended, so as to awaken the excitability of the central ganglionic cells.

3. The induced current is absolutely contraindicated; under favorable circumstances the constant current may cure the disease in a year.

4. In advanced cases where atrophy of the central ganglionic cells, and consequently atrophy of the muscles already exists, the progress of the disease can only be arrested by the constant current applied over the spinal cord, especially over the cervical portion and over the ganglia of the great sympathetic.

5. The irregular course of the atrophy and especially the circumstance that it does not follow the course of the nerves, but affects at the same time muscles dependent on different nerve trunks (a fact which has led some to place the seat of the disease in the muscles *), is explained by the fact that the disease has a central origin, and that the ganglionic cells of these centres, on which depends the atrophic state of the muscles, have a different arrangement from the fibres taking origin from these cells to proceed to the nerve trunks.

6. The disappearance of electric excitability in the atrophied muscles is not always an absolute proof of their fatty degeneration.

No one will need a book on auscultation after reading Alfred Luton's article of 115 pages on this subject.

Of the article on the Medico-Legal Aspects of Abortion, it is only necessary to say that it was written by the lamented Tardieu.

“A bath is the more or less prolonged immersion of the

* Friedreich holds this view. Charcôt & Jaffroy dispute it.

body, wholly or in part, in a liquid, solid or gaseous medium"—E. O. Henry. This appears to "cover the ground as completely as an umbrella does an ant-hill," unless some hypercritique chooses to maintain that mud is neither solid, liquid nor gaseous. Oré commences his lengthy but neither tedious nor verbose article on Baths with the above definition. The article is most carefully and elaborately written, and includes every species, from acid- to water-bath. The author gives the results and conclusions of Westrumb, published in 1828, and begs leave to differ with him as to cutaneous absorption.

J. N. Demarquay devotes sixty pages to his discussion of *Hare-lip*. As to its origin he believes with Sappey:—

1. That hare-lip is due to arrested development.
2. That the arrests of development happen more especially to parts whose union is slow.
3. That when they strike parts whose union is precocious, there is a very high degree of deformity.
4. That they happen simultaneously to both the soft and hard parts, though the first may not be subordinated to the second in their evolution, and *vice versa*.

5. That they are only manifestations of a cause, to us as yet unknown in its nature, which may explain why they attack the upper lip only in the the great majority of cases.

On arriving at the fifth volume, we are refreshed by Drinks, an article of fifty pages by Louis Hébert. He describes and gives the medicinal value of the various wines, whiskies, brandies, etc., found in Europe, but altogether neglects our fragrant mint julep.

Jaccoud follows with an interesting article on *Addison's Disease*. As to its pathogeny, he says: "The morbid state is the result of an alteration of the abdominal sympathetic system." "The reality of a primordial alteration of the nervous system is demonstrated by three orders of facts: (1) The symptoms. (2) The lesions of the disease; and (3) The structure of the suprarenal capsules." He thinks that electricity might render valuable service in sustaining the failing excitability of the central nervous system.

The chief attractions of the sixth volume are an article on Cancer by Hertaux; one on Cataract by Liebreich; Carotids, by A. Richet; Catalepsy, by Marcé; Venæ Cavæ, by Denunce; Headache, by L. Martineau; Cæsarean operation, by Stoltz, and a most elaborate article on Heat by Demarquay.

But we need not drink a whole cask of wine to determine the quality. The work before us is undoubtedly the grand-

est medical publication in existence. It should have a place apart from other works in the library, and just under it should come the new *International Cyclopædia of Surgery*, so ably edited by Dr. Ashhurst.

We have but one objection to the work; and that is not vital, because remediable. It is *not* Americanized. *Russell's System of Medicine* has been, and *Holmes' System of Surgery* more ably. Why don't some enterprising members of the American profession take the book in hand?

WM. E. G.

Transactions of the Medical Society of the State of Pennsylvania. Thirty-second Annual Session. Vol. XIII—Part II. Held at Lancaster, May, 1881. 8vo. Pp. 407. DR. JACOB L. ZIEGLER, Mt. Joy, Pa., *President*; DR. WILLIAM B. ATKINSON, Philadelphia, Pa., *Secretary*.

The address of the retiring President, Dr. John T. Carpenter, of Pottsville, had for his subject the "Management of the Insane." He first referred, briefly in each instance, to State medicine, clinical medicine, medical organization and medical education. He advocated reforms as to the employments of the insane, and non-restraint; he spoke commendably and advisedly about the supervision of the insane, as also regarding their classification. Finally, he notices the defective organization (or "administrations") of American lunatic asylums. The "address in surgery" is good, as far as it goes—prepared by Dr. S. M. Ross, of Altoona. Dr. S. S. Schultz, of Danville, made the "Address in Mental Diseases." This, too, was a short but a valuable paper for legislators to read as to their appropriations for the support of hospitals. Dr. Benj. Lee, of Philadelphia, delivered the "Address in Hygiene," which relates mostly to the arrangements of private dwellings. Dr. J. Solis Cohen, of Philadelphia, in his "Address in Medicine," speaks chiefly of the action of some little known or little used remedies which have recently been brought into somewhat prominent notice. He studies, by clinical experience, such drugs as Jamaica dogwood, citrate of caffein, salicylic acid, calcium chloride, etc. The "Address in Obstetrics," by Dr. S. T. Davis, of Lancaster, discusses, first, the opening of the abdominal cavity. This address is evidently the result of but little reading or personal knowledge of what the author treats, beyond his informants from Pennsylvania. True, proper credits are given Dr. H. P. C. Wilson, of Baltimore, for his

important contributions, but we do not find mention of several of the many true advances which have been given the profession by authors of eminence in other States. His review of the subject of "puerperal pyæmia" is very good. Dr. Jacob Price, of West Chester, forcibly impresses the "importance of local treatment in congestion and inflammation of the cervix uteri in pregnancy." The nature and treatment of affections of the lachrymal passages is ably portrayed by Dr. S. D. Risley, of Philadelphia. Dr. John Curwin, of Warren, strongly and properly recommends "rest in nervous diseases." Dr. Traill Green, of Northampton, teaches important principles relating to the "preparatory education of medical students." Dr. Oscar H. Allis, of Philadelphia, has about a page article on preliminary medical examinations, but the paper contains nothing new. Dr. William Goodell, of Philadelphia, contributes some "clinical notes on the extirpation of the ovaries for insanity." We wish we had the space to copy the paper entire—it is so valuable. Dr. James Tyson, of Philadelphia, gives "notes on albuminuria" of value to all practitioners. Dr. Laurence Turnbull, of Philadelphia, has an excellent paper on "diseases of the ear in locomotive and other engineers, firemen and conductors, which may endanger the lives of the traveling public." This paper should be well and thoroughly studied by all who have appointive power in regard to such officials as are referred to in the title. Dr. C. C. Seabrook, of Harrisburg, has an interesting article on the "pathology of shock," which is illustrated by wood cuts. Dr. Isaac N. Snively, of Waynesboro, speaks practically of "hygiene in its relation to the medical profession." Dr. Crawford Irwin, of Hollidaysburg, records the history of the epidemic of scarlatina in his town during 1880-1. Dr. R. H. Milner, of Chester, briefly describes the parasites frequently found in the human body. Dr. J. L. Crawford, of Greensburg, treats very importantly of the "indications calling for active treatment in typhoid fever." Dr. Carl Seiler, of Philadelphia, has a short paper on "chronic laryngitis." Whatever he says on such a subject may be considered authoritative. Dr. R. J. Levis, of Philadelphia, has a paper of suggestive value regarding the "treatment of hydrocele and serous cysts in general by the injection of carbolic acid." Dr. Allis has a second article on the "danger from fractures in close proximity to the knee-joint," as well as another on "deformities from fracture at the elbow-joint"—both of which are illustrated by wood-cut tracings. After this fol-

low the reports from County Medical Societies—almost every one of which contains the history of some rare case which is worth recording. After these county reports comes another paper by Dr. S. D. Risley on “weak eyes in the public schools of Philadelphia,” which is the report of the “committee on examination of the eyes of the children.” The conclusions are as accurately drawn as are the records of the facts themselves. He verifies his statistical accounts by tables, and illustrates other matters of statement by drawings from actual designs. After all of this and this, we find the statistical report of the Philadelphia County Medical Society; then come the indices of names and subjects.

We have given unusual space to the notice of these *Transactions*, because we regard them as most excellent in their scientific import. Another thing we must commend is the short character of the papers presented for publication. Our space is already overrun. But we must reiterate that this volume is one of the most important that has been issued by the Society.

Papers and Proceedings of the National Association for the Protection of the Insane and the Prevention of Insanity.

DR. H. B. WILBUR, M. D., Syracuse, N. Y., *President*; DR. GEORGE M. BEARD, 52 west Thirty-fourth street, New York, N. Y., *Secretary*. 8vo. Pp. 55. G. P. Putnam's Sons. 1882. (From Publishers.)

Dr. Nathan Allan, of Lowell, Mass., is the author of the first paper in this neatly issued and valuable volume. The title of his paper is “Insanity in its Relations to the Medical Profession and Lunatic Hospitals,” which he treats in his usual masterly manner—suggesting many things of great practical importance, not only to specialists, but to general practitioners. D. C. L. Dana, of New York city, contributes the second paper, which had formerly been published, in substance, in the April number, 1882, of the *Journal of Mental and Nervous Diseases*, on the “Needs of the Insane, with Statistics of Insanity in the United States.” Our appreciation of this paper is shown by the fact that we have made a full “brief” of it for the department of “Analyses, Selections, etc.,” in this issue. “The Function of a Consulting Staff to Lunatic Asylums” is the title of the third paper, by the distinguished Dr. E. C. Seguin, of New York. Some points made by the Doctor are debatable, to say the least, arguing from a standpoint of propriety. The fourth and last paper was by Dr. J. C. Shaw,

of Brooklyn, N. Y., relating to "A Second Year's Experience with Non-Restraint in the Treatment of the Insane." His views, with which we heartily concur, may be understood from the following quotation: "It is gratifying to learn * * * that there has been a diminution of the use of restraint apparatus within recent times, and doubtless this will continue, following the same course as it did in Great Britain."

Treatise on Human Physiology. By JOHN C. DALTON, M. D., Professor of Physiology and Hygiene in the College of Physicians and Surgeons, New York, etc. Seventh Edition, with 252 Illustrations. Philadelphia. Henry C. Lea's Son & Co. 1882. 8vo. Pp. 722. Price: Cloth, \$5.50; Leather, \$6.50. (For sale by West, Johnston & Co., Richmond.)

The demand for an *eighth* edition at so early a day since the preceding edition was issued shows, at once, how popular this work has become as a standard. One can scarcely open a college catalogue that does not have mention of "Dalton's *Physiology*" as the recommended text or consultation book. Most of our readers are anxious to know which, of the many excellent physiological works, is the best for the purposes of the practitioner. For American students, we would unreservedly recommend the edition of Dr. Dalton's work now before us. Several changes as to arrangements of chapters, as well as amendments in the composition of the text itself have been made in this edition. The most notable improvements in this edition, perhaps, are to be found in the chapters on physiological chemistry and the localization of cerebral functions. Let it suffice (as we are pressed for space) to state that other revisions have been made to such an extent as to bring the present volume as fully up with the present state of physiological knowledge as it is practicable for any author of a book to do. Not only has Dr. Dalton proven himself to be an original investigator of physiological problems, but he has equally distinguished himself as a careful observer of physiological records. The merits of this book justly entitle it to be placed in the first rank of the choicest physiological works.

Proceedings of the American Pharmaceutical Association. August, 1881. 8vo. Pp. 612. P. W. BEDFORD, New York city, *President*; JOHN M. MAISCH, Philadelphia, *Secretary*.

This Association is of direct interest to pharmacists and druggists, and, of course, its maintenance and success inter-

est the physician. The annual *Proceedings* of this Association shows that this body is fully alive to the importance of sustaining its high standard. Doctors are dependent upon the "trade," as some pharmacists state it; for what doctor out of a hundred can assert, *ex cathedra*, as he prescribes or administers the medicine, whether it is pure laudanum, or properly prepared Fowler's solution, or even Dover's powders, etc. Not one doctor in a hundred, as an average, we venture to say, can decide what is, or what is not a pure drug. His confidence must rest upon his belief in the honesty and knowledge of the druggist. As the American Medical Association is presumed to admit none into its membership who is not conversant with the rudimentary knowledge appertaining to the science and art of pharmacists, we must conclude that those are the best druggists or apothecaries in any community who are members of the Association.

But all these general remarks aside. The publication on our table manifests active and careful work on the part of the "reporters;" and each of the several general papers is well prepared, and adds to the stock of pharmaceutical knowledge. A good likeness of Charles W. Badger, of Newark, N. J., forms the frontispiece. We wish we could reach sufficiently well the eye or ear of our Southern druggists and pharmacists to induce them to take positive interest in the Association. It would do good. We are glad to know that the principals of such city houses as we advertise in our journal are active members of the Association.

Practical Treatise on Diseases of the Skin. By LOUIS A. DUHRING, M. D., Professor of Diseases of the Skin in the Hospital of the University of Pennsylvania, etc. Third Edition. Revised and Enlarged. Philadelphia. J. B. Lippincott & Co. 1882. 8vo. Pp. 685. Price, \$6. (For sale by West, Johnston & Co., Richmond.)

The esteem in which Dr. Duhring is held as an author on skin diseases may be judged by the rapid exhaustion of his publications on the subject. The first edition of his *Treatise* was published in 1876; in 1881, a second edition was demanded, and now a third. Whatever of improvements may have been made in the second edition, we find many more in the third, so that the book, as it now appears, well represents the present state of knowledge concerning diseases of the skin. The work consists of two Parts—Part I being devoted to "general considerations," while Part II relates to "special diseases." We would recommend in highest terms the adoption of this as a text and consultation book—for the

college student and the practitioner. We regret want of space prevents us from making some more special notes of this *Treatise* so as the more clearly to impress its merits upon the minds of our readers.

The Physician Himself, and What He Should Add to the Strictly Scientific. By D. W. CATHELL, M. D., Late Professor of Pathology in the College of Physicians and Surgeons, Baltimore, etc. Baltimore. Cushings & Bailey. 1882. 8vo. Pp. 194. (By mail.)

This is a very readable and suggestive book. To the Doctor just about to start out on his professional career, it gives, in general, most excellent advice—even down to details. To the older practitioner, it furnishes food for reflection. A careful reading of this book leads the physician to a study of himself and reminds him of the great responsibility he is under towards both the living and those that are to come after. We would advise every doctor to well weigh the advice given by Dr. Cathell, and govern his conduct accordingly. A first-rate index is appended, which permits ready reference to subjects discussed.

Transactions of the College of Physicians of Philadelphia. Third Series, Vol. V. Dr. W. S. V. RUSCHENBERGER, *President*; Dr. RICHARD A. CLEEMAN, *Secretary*. 8vo. Pp. 293. 1881.

Memoirs engage the space of 174 pages—less the title, lists of officers, announcements, etc. “Foot-Binding in China” is the title of the first general article by Dr. Robert P. Harris, which gives an account of the process and effects of this terribly disfiguring habit among the Chinese women. We see nothing “æsthetic” in such feet; and the terrible agony which those who practise the habit of “foot-binding”—whether according to the method here stated as peculiar to the Chinese girls and women, or by too tight shoes—awakens a feeling of human sympathy on account of moral weakness. Dr. Arthur V. Meigs reports a “case in which heart-clot occurred as a consequence of uræmic convulsion and tumors in the heart.” A couple of wood-cuts are used to illustrate the paper. Dr. Richard A. Cleeman reports on the “Meteorology and epidemics for the year 1878.” This is highly scientific, and, at the same time, a most valuable contribution. Dr. James H. Hutchinson reports an unusual “case of general hyperostosis,” which is illustrated by two photographic drawings. Dr. J. M. Da Costa reports two cases of “starvation fever,” which will prove valuable to every medical

man who has become biassed by the successful trials made some time ago to prove that "healthy" parties could live, when taking no food and but little exercise, beyond that of a purely passive character. Dr. J. Ewing Mears reports a "case of diabetes mellitus in which double cataract existed." Dr. George Hamilton gives his "thoughts upon vivisection, with reference to its restriction by legislative action." The volume, as a whole, is one of the most instructive of Society proceedings or transactions that we have ever examined.

Lectures on Venereal Diseases. By W. F. GLENN, M. D., Professor of Anatomy and Venereal Diseases in the Medical Department of the University of Tennessee, etc. Nashville: Wheeler & Osborn. 1881. 8vo. Pp. 259. (From Publishers.)

This book appears to have been written in compliance with a request from the Professors' class of 1879, and of later students and graduates. He has done a good service in presenting the subject of venereal diseases in a practical manner, and he has done himself credit by the simplicity of his manner of writing—almost as if he was talking to his students. We cannot say that this is the superior of "Van Buren & Keyes," nor yet even of Bunstead's work on the same subject; but the author has culled many items from his memory of conversations with other practitioners, or from his readings of books and journals, which add materially to the value of the book. We heartily commend it as a companion book to either of the two illustrious works we have named; while the students and graduates of the Medical Department of the University of Tennessee should accept it as the utterance of their Professor who knows what he is talking about.

Transactions of the American Gynæcological Society. Dr. W. H. BYFORD, Chicago, *President*; Dr. J. R. CHADWICK, Boston, *Secretary*. Vol. VI. 1881. Philadelphia: Henry C. Lea's Son & Co. 1882. 8vo. Pp. 542. (From Publishers.)

Membership in this Society is economy. By such a relationship, one becomes the possessor, annually, of a volume that is worth many times the cost of initiation fee and yearly dues. The most expert and practically eminent gynæcologists of the country form the corps of contributors to the *Transactions*. Sometimes text-books are wanting in perspicuity as to the text, which want of clearness of description might easily be relieved by a diagram or a wood-cut. Generally speaking, drawings are inserted in these *Transactions* whenever needed.

After the President's address, which relates to the Society matters in general, Dr. Samuel C. Busey, of Washington, D. C., read a paper of much value, illustrated by cases in his practice, on "acute hyperæsthesia of the peritoneum, either circumscribed or diffused, following minor gynæcological operations and manipulations." This paper excited discussion—the chief debater on the subject being Dr. Trask, of Astoria, who spoke forcibly, illustrating his point by a case that was also seen by Dr. Fordyce Barker. Drs. Henry F. Campbell, Van de Warker, Engelman, Emmet, J. E. Taylor and Noeggerath participated. Dr. Henry J. Garrigues, of New York, next offers a paper on "exploratory puncture of the abdomen." His paper showed the result of much research, and related chiefly to operations pertaining to tumors or cysts. Dr. Marion Sims congratulated him, as did Dr. Drysdale. Dr. Leopold Meyer, of Copenhagen, pronounced it "able." Dr. H. P. C. Wilson was grateful for it. Dr. Lyman had lost a case by an operation after tapping. Dr. Barker spoke of some of the injuries that may and have resulted from tapping. Dr. Emmet said that generally he had "trouble after tapping." Dr. Dunlap thought it more difficult to diagnose "after tapping than before." Dr. Campbell criticised the remarks of those who had discussed the paper, saying that they had taken a too wide range. We wish we could even spare room to make a brief of the remarks by Drs. Engelman, Kimball, W. T. Howard, Drysdale, Dunlap, Chadwick, Noeggerath and Julius H. Gelbe (of Dresden). Dr. G. H. Lyman, of Boston, gives some "notes on [41] cases of pelvic effusion resulting in abscess," which are very instructive, which went through the rub of a friendly discussion. Dr. Nathan Bozeman, of New York, read a paper on "genital renovation by kolpostenotomy and kolpoecpetasis in urinary and fecal fistulis." We see no need of the introduction of such hard-sounding and extremely foreign words that belong to a *dead* language, the meaning of which cannot be found in such a standard authority as "Liddell and Scott." The Doctor, being an American and an English-speaking person, appears to make himself prominent by using hard-to-be-defined terms; but such is not the true character of this eminent author, for he is as practical in all his work and writings as anybody in the country. Whatever may be the scholastic acquirements of our author, or of the best of his readers, it seems a little pedantic—a pedantry which a great man should not be guilty of—to use so many words that but few ordinary readers know the meaning of unless he looks

over his Greek lexicon. His words are such as these: "Kolpostenotomy," "kolpoecpetasis," "kleisis," "epheikosis," etc. What country doctor ever heard of such terms! Let our author be a little moderate the next time he ventures to use "another word for which I am partly responsible." We have no heart to go into a fuller notice of this paper, which did not receive the usual courtesy of a discussion by those who heard it read. Dr. Ely Van de Warker, of Syracuse, N. Y., has an excellent paper on "forcible elongation of pelvic adhesions." Dr. Isaac E. Taylor well describes some cases of "lupus or esthiomène of the vulvo-anal region," which he illustrates by the narration of cases, as well as by drawings. Dr. Wm. Goodell has an instructive paper on "bursting cysts of the abdominal cavity." In the discussion, Drs. Campbell, Dunlap and Sims especially detailed remarkable cases. Dr. Henry F. Campbell next gives an admirable article on "erysipelas in childbed, without puerperal peritonitis." Dr. T. Gaillard Thomas speaks, in his usual instructive style, of "expansion of the bladder over the surface of abdominal tumors, and its attachment to them or to the adominal walls as a complication of laparotomy." Dr. Thad. A. Reamy, of Cincinnati, reported a rare case of "fibroid polypus with partial inversion of the uterus, with specimens," one of which specimens is illustrated by a woodcut. Dr. Albert H. Smith, of Philadelphia, contributes a paper of general scientific interest on "axis traction with obstetric forceps." Dr. A. D. Sinclair, of Boston, presents a table, valuable for reference, relating to "measurements of the uterine cavity in childbed." Dr. J. W. Underhill, of Cincinnati, has a paper of instructive importance on "jaundice in pregnancy," founded on several cases that came under his personal care or knowledge. The paper by Dr. E. W. Jenks, of Chicago, on "the practice of gynæcology in ancient times," is one of the most novelistic of all the medical articles we ever read, unless it be that by Dr. Engelman, which appeared in a former volume of the Society's "*Transactions*." The two papers just referred to, if issued as a separate publication, would make a popular book for doctors. One paper is the exact "filling up" of the other.

Parties in seeking membership in the Society, have to present acceptable papers to the "Council." The first of such papers presented and accepted was that by Dr. William M. Polk, of New York city, on "Can laceration of the cervix uteri be prevented?" which question he answers in general by saying that most of those, capable of causing disease, are

avoidable. Dr. Walter R. Gillette, of New York city, makes a "point in the management of the first stage of labor." The doctor opposes some long ago authoritatively pronounced ideas on this subject, and comes to the help of many of the younger practitioners who, thinking for themselves, have adopted the very practice which is more or less common in this section. He advocates "active assistance by digital dilatation of the cervix uteri at once," in the first stage of labor—a point which has the practical support of those who have adopted the plan. Dr. Charles C. Lee, of New York city, has an excellent paper, in general, upon "the treatment of chronic perimetritis by puncture and iodine injections." Dr. Frank P. Foster, of New York city, presents an instructive *resumé* regarding the present degree of information on "the mechanical action of pessaries." "Mania lactea"—the delirium that sometimes occurs during the nursing stage of mothers—is the title of the next paper by Dr. E. W. Sawyer, of Chicago. Many have seen the trouble. It is chiefly due to the loss of the phosphates, and is remediable by supplying phosphorous compounds or food containing phosphorus in some form, and release from all sources of nervous excitement. Dr. B. B. Browne, of Baltimore, publishes "a contribution to the history of combined intra-uterine and extra-uterine twin-pregnancy, with an analysis of 24 cases," etc., which will prove of great value to those looking up the literature of the subject.

Diseases of Women. By ARTHUR W. EDIS, M. D., Lond., F. R. C. P., M. R. C. S., Assistant Obstetric Physician to Middlesex Hospital, etc. With 148 Illustrations. Philadelphia: Henry C. Lea's Son. 1882. 8vo. Pp. 576. (For sale by Messrs. West, Johnston & Co., Richmond.)

This book, we regret to say, is not an essential to American students or practitioners. There is a sort of "abbreviation of matters" generally which either does not express the author's views, or else makes him appear as careless in his composition. Beyond this, we have nothing to say against the book. On the other hand, the *general* material is of the usual value of ordinary text-books. It discusses such subjects as "normal ovariectomy" and "Battey's operation" under different headings and in different sections of the book—as if the author did not know the likeness of the one to the other. Such a reflection against the intelligence of Dr. Edis would, of course, be offensive. We can only say that we intend nothing of the kind; but still, as exponents "on the

tower," we could advise students to get better text-books, and our subscribers to get better consultation books.

Messrs. Henry C. Lea's Son & Co. are undoubtedly the leading and most trustworthy of all the publishers of the country who limit themselves to medical publications. They, however, have this one fault, that they publish preferably that which is foreign to that which is American, as to its authority. If this excellent firm, if it intends to limit itself to the republication business, were to have more liberal American critics of foreign authorities, who might add many useful notes or fill out English abbreviations, or explain the prescriptions selected from the British and other Pharmacopœia, it would do everybody good.

Editorial.

Dr. J. Marion Sims, we are authoritatively advised has fully regained his health, and will soon return from Europe to his New York home to enter again into active practice. This is news that causes us to rejoice. We cannot yet spare him from the profession. His eminent services in the past, and his still progressive studies and observations make his return to practice a ground for hope that their important advances will soon be made in the special line of gynecology at least. We are particularly anxious that the Doctor's book, so long promised the profession, should come to light from the publisher.

Dr. Frank D. Cunningham, of Richmond, was the only representative of the Virginia profession in attendance upon the 1st session of the American Medical Association. In his attendance, Virginia was well represented. We are greatly indebted to him for the favor of keeping us fully posted.

To Correspondents.—We must again request those who write to the Editor of this journal, on several subjects in the same letter, to use, as far as practicable, separate sheets of paper for subjects that do not relate to the journal matter.

To Subscribers.—A number of our subscribers are behind hand in remitting their subscription money. We hope this reminder will be sufficient to accomplish the end in view. Try to "pay as you go." All can't; but some can and should. We do not wish to appear oppressive on any one who will do his best.

For Sale.—Many of our readers will be glad to know that some of the articles to be named or books or journals are purchasable. They are offered for sale by one of our most useful contributors or subscribers. Any communication addressed to the Editor of the *Medical Monthly* on the subject, especially those relative to prices, will be at once communicated to the gentleman who has the articles for sale. He offers a first-class obstetric manikin, made of the finest buckskin, open to button over the abdomen. It is not soiled in the least. The representative fœtus is slightly torn at the neck; but it has a good cord and a good placental substitute. The entire manikin is enclosed in a nice wooden case. The manikin representation of the woman has straps on her back "to keep her from getting out of bed" during the second stage of labor. It would be well for a medical college or a tutor, instructor or professor of obstetrics to remember this. The writer also has several files of medical journals, complete and incomplete, of which he wishes to dispose. Among such journals, it is stated that the party referred to has a file of that most invaluable journal, the *American Journal of Medical Sciences*, except for the years 1862 and 1865 inclusive. Among files of other journals—complete and incomplete—are *Braithwaite's Retrospect*, *Boston Medical and Surgical Journal*, *Rankin's Abstract* (11 volumes, 1845–1854 inclusive, in sheep and others in paper), *American Medical News and Library*, *American Journal of Science and Art* (complete), *Philadelphia Magazine and Journal of Science*, *The Stethoscope*, *Virginia Medical Journal*, *Richmond and Louisville Medical Journal*, *Charleston Medical Journal and Review*, *Monthly Abstract of Medical Sciences*, *Medical Recorder* (16 volumes—sheep), *British and Foreign Medico-Chirurgical Review*, *Houston's Medical Examiner*, etc., etc.; also about twelve anatomical maps, life-size and well colored. It may add to the interest of the purchaser to be informed that many of these publications, etc., belonged to the world famous surgeon, the late Dr. Joseph P. Mettauer, of Prince Edward county, Va.

The Working Bulletin is the title of a new and very important publication by that well-established and energetic house, Messrs. Parke, Davis & Co., of Detroit, Mich. This firm is constantly doing something to promote the interests of the medical and pharmaceutical professions. The *Bulletin* publishes full reports from competent investigators—whether favorable or otherwise—relating to new remedies, and even

solicits the just condemnation of any new drug. The object of Messrs. Parke, Davis & Co., by this publication, is to call attention to those articles which are worthy of confidence or further trial, as well as to caution against the use of those agents which have been sufficiently tested and found wanting in true merit. Quebracho, Jamaica dogwood, cascara sagrada and other new drugs receive an impartial review—based upon the actual experience of physicians all over the country. The *Bulletin* is sent free to any doctor who will send his address to Messrs. Parke, Davis and Co.

Health of School Girls.—The *Medical News*, July 15th, in treating of summer sports, says: "No class of women need development of the muscular and respiratory systems more than growing school girls, and, as akin to the subject, we must urge a wider and more thorough introduction of the beautiful and graceful system of calisthenics recently devised and perfected. * * In time we hope the American woman will not only have legs, but know how to use them; having a back, will be unconscious of it; and in time of emergency be able to swim or to row, to shoot or to climb almost as well as her brother."

University of Louisville.—We learn from the *Medical News* that Dr. John A. Oosterlony has been elected to the Chair of Materia Medica, Therapeutics and Clinical Medicine, and Dr. L. S. McMurtry Demonstrator of Anatomy in the Medical Department of the University.

Surgeon-General Joseph K. Barnes, U. S. A., has been retired from active service, under provisions of Act of Congress approved June 30, 1882.

Obituary Record.

Dr. John F. Gray, the first physician in America who was converted to the system of Hahnemann, died on June 5th at the Fifth Avenue Hotel, New York, after being ill for more than three weeks. He was born in Shelbourne, N. Y., on September 23, 1804.—*N. E. Med. Gazette*, July, 1882.

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Original Communications.

ART I.—**Roetheln.** By GEORGE BYRD HARRISON, M. D., Washington, D. C.

SYNONYMS: Epidemic Roseola, German Measles, Rubeola Notha, etc.

The embryonic state of our knowledge of this singular exanthem is well shown by comparison of the last two editions of Drs. Meigs and Pepper “on the *Diseases of Children.*” Dismissed, in the sixth, in a single paragraph (wonderfully concise, it is true, but very brief), it has claimed two pages in the seventh edition. Such accounts as this, with those of Dr. Loomis (*Lectures on Fevers*, 1877) and of Dr. Bartholow (*Practice of Medicine*, 1881), leave us little to desire in the way of description; and yet there are some discrepancies of statement in these and other contemporary accounts, which are exceedingly perplexing. For example, Dr. Bartholow tells us that “the eruption consists of rose-colored spots, the size of a pin-head up to three or four pin-heads, well defined and somewhat elevated;” while Drs. Meigs and Pepper state that they are “macular” only; and Dr. Hartshorne (Reynold’s *System of Medicine*, 1880,) styles them “sub-papular.” Dr. Bartholow asserts that no symp-

toms occur until the eruption appears; in other words there is no prodromal stage, or "invasion or initial stage." Yet it is conceded by nearly all observers that severe cases offer a distinct prodromal period of from a few hours to two days. These examples afford an illustration of, but by no means include all, the contradictions referred to.

Considering the early date of Dr. Loomis's account, its fullness and accuracy offer a striking example of his usual acuteness of observation.

All, or nearly all, of the authors consulted describe the disease as rather trivial, and as attended by no disagreeable *sequelæ*. Perhaps this will not prove to be strictly true. Certainly some cases have been known to assume a very grave type.

I distinctly remember being told by Dr. W. C. N. Randolph, in the year 1879, of two cases in the neighborhood of Charlottesville, Va., in which temperature had to be controlled by the cold bath. And there were others in the vicinity, at the same time, in which the urine was nearly solidified by heat and nitric acid. This epidemic seemed to simulate scarlet fever more nearly than rubeola.

I have recently attended a number of cases at the Washington City Orphan Asylum, for the most part exceedingly mild, whose characteristics were much nearer to those of measles than of scarlatina.

To the first of these, a girl, aged thirteen years, name L. B., a native of Richmond, Va., I was called on the third of May last, an intelligent girl, who said she had had measles a year ago. She noticed herself to be suffering the day before; she said she had had headache for *two* days. When seen by me the eruption was fully out over her face, and quite generally over her chest and extremities. Color, pinkish-purple (more rosy than that of rubeola); face swollen and presenting much the arrangement of the measles rash. High fever (although exact temperature was not taken); no account of cough or sneezing, though carefully inquired into. Conjunctivitis with epiphora; tongue not at all characteristic; throat but slightly injected, or otherwise affected. She was, of course, isolated, kept in bed, bowels regulated as necessary with saline laxative, fever-mixture every three hours, and sponge bath occasionally. Diet restricted to

milk and other very simple food. The rash faded in about three days, and she made a fair recovery, though not absolutely strong at this writing, (June 19th.) She is, however, growing rapidly, and has not been robust previous to this attack.

This case was followed by others, presenting the characteristic, rose-colored, rash; but, for the most part, without prodromal symptoms and so mild as scarcely to need any attention whatever.

On the 30th of May I myself awoke with my limbs and shoulders aching,* bad taste in mouth, general malaise, bowels rather close, unpleasant sensations about the head. I thought I was suffering from "biliousness" due to malaria, and took, at bed-time, a mercurial cathartic, with eight grains quinia sulphate. This gave temporary relief, but in the afternoon of the 31st, symptoms were all worse, and I was obliged to quit work and lie down. Temperature was, however, only 101.6°, under tongue. An attendant remarked on the very peculiar appearance of my eyes. There was some cough and sneezing. I took eight grains quinia at bed-time and same dose in early morning; passed a wretched night, and got up to find myself thickly peppered with a rose rash—more or less confluent upon the face, punctate over chest and limbs, distinctly papular, momentarily disappearing on pressure, soft. This was easily recognized, as the acquaintance of which I had lately seen so much. Eyes intensely red and watering; fauces injected, and feeling dry and stiff, but not at all sore; anorexia marked. I confined myself to a dark room and chiefly to a milk diet. Temperature fluctuated between 100.5 and 101.5. On June 4th, eruption had disappeared and temperature was normal.

There was no desquamation detectible even with a lens of moderate strength. Pruritus continued a day or two after disappearance of rash. Post-cervical gland of left side enlarged, indurated and tender for a few days.

I have been thus particular in describing this case, because there was no doubt of a previous, severe attack of scarlatina in 1856; and of a typically sharp seizure of measles in 1861. The former was diagnosed and treated by the late Dr. R. R. Ritchie, of Brandon, James river, Va.; the latter by Dr.

* According to Dr. John H. Gilman, of Lowell, Mass., "severe, sometimes excruciating, backache is present in a small proportion of cases of roetheln." See *Boston Medical and Surgical Journal*, March 16th, '82.

Edward Graham, of Lexington, Va. However, the symptoms were not to be confounded with those of either disease.

Now, as to *sequelæ*; with all the care I have been able to use, my eyes are still much affected. The left one is yet injected; at times painful and constantly uncomfortable. Without proper care, there is no doubt that permanent injury would have resulted.

It will be seen that these observations conflict in some points with those cited, viz: As to the occasional occurrence of *sequelæ*, and as to confluence of the rash upon the face (generally denied).

It would seem, according to all accounts, that this disease is capable of two forms—a scarlatinoid and a rubeoloid, and here, possibly, is the explanation of the conflict of authorities in regard to the character of rash. The rubeoloid is papular, or “sub-papular,” and the scarlatinoid macular. In this connection, it is significant that Drs. Meigs and Pepper, who regard it as macular, note also the resemblance of their cases to scarlatina.

Are we then to suppose *two* “Roethelns” each with its special *materies morbi*, capable of reproducing itself and nothing else; and one attack giving immunity from another of its own kind only—or is there *one noxa* simply manifesting itself now under one set of symptoms, now under another—at one time rubeoloid, and another scarlatinoid? It would seem that the disease requires further study to reconcile or explain the opposite *phenomena* recorded; and to decide whether an attack of the scarlatinoid type ordinarily gives protection from rubeoloid epidemics, and *vice versa*. It is very hard to believe that manifestations so varied are traceable to a single source; and no so-called “hybrid” condition suggests itself, whose symptoms are as capricious and inconstant as these.

1345 F. St., N. W.

Sanitarium for Poor Children.—Mr. Chas. G. Francklyn, of Long Branch, in whose sea-shore cottage President Garfield died, has just founded and endowed a sanitarium for poor children at Elberon.—*Boston Med. & Sur. Jour.*, June 29, 1882.

ART. II.—**Cholera Infantum.** By R. B. STOVER, M. D., Richmond, Va. (Read before the Richmond Academy of Medicine, June, 1882.)

I approach the discussion of the symptoms, morbid anatomy, pathology, etc., of cholera infantum with some hesitancy—knowing that the views which I hold are somewhat different from those entertained by the profession generally, and again that this subject has been so thoroughly studied, and presented with such intellectual light, that I scarcely dare attempt to review it with the hope of adding to its interest.

There is so close a resemblance between cholera infantum and the summer diarrhœa of infancy and childhood, that, taken together, they sometimes assume such proportions that, by common consent, it is called the “Summer Epidemic of Children” in this country, and by foreign writers an American disease. To elucidate this matter, I believe there should be a distinction made between the two diseases—the one to represent that disease which is ushered in suddenly by frequent vomitings, high temperature, rapid and great emaciation; the other by a milder beginning and more protracted course, the patient finally succumbing to marasmus, after weeks or months of prolonged suffering. If this distinction were made, I believe our mortality tables would not show that in America cholera infantum is so much more frequent and fatal than in Europe.

The symptoms of cholera infantum sometimes resemble so closely those of Asiatic cholera that the differential diagnosis could not be made were it not that the latter disease did not prevail at the time. And again, it is preceded by premonitory stages of diarrhœa for some days or even weeks. In either case, the immediate attack usually comes on in the night, by continuous diarrhœa, the evacuations soon becoming so thin that they soak into the bedding and diapers, scarcely staining them, and soon assume the characteristic appearances of the rice water evacuations of Asiatic cholera. At the same time, uncontrollable vomiting sets in—everything swallowed being almost instantly rejected, or if there

be nothing in the stomach, or if the little patient be too far prostrated to make the effort, then intolerable retchings are constant. These symptoms are accompanied by insatiable thirst, the infant or child eagerly taking any fluid offered in order to relieve the tormenting demand. Fever exists in a high degree in the most of cases; in fact, in no infantile malady is the temperature higher, after reaction has taken place—the thermometer frequently marking as high as 105° , or even 108°F . In many of the rapidly fatal cases, however, fever is entirely wanting, the thermometer registering even lower than a normal temperature—the patient dying before the febrile reaction takes place. The pulse is accelerated, small, and sometimes imperceptible, the extremities are cold, eyes sunken, lips livid, pale countenance, hollow cheeks, sunken fontanelles, drawn angles of the mouth, great restlessness, rolling and tossing from side to side, and finally a state of apathy and quiet, deep sopor—in fact, unmistakable collapse. The loss of strength and tissue waste is greater, and the shock more profound than in any other disease except Asiatic cholera. It is hard even for fond parents to trace any resemblance between the shrunk and haggard features of the little sufferer and the hardy, robust and full form of their child of a few hours or days before.

If the case is to terminate favorably, the retching and vomiting cease, the stools become less frequent, the pulse fuller, the skin warmer, and all the symptoms gradually improve, convalescence sometimes beginning at once, and at other times being prolonged to weeks and months, and interrupted by frequent relapses. If the case is to terminate unfavorably, the child lies with half-closed, sunken eyes, the urine is scant or, perhaps, suppressed, the cries can scarcely be heard, but there is continuous diarrhœa and retching, the pulse entirely fails, and then there is cold, clammy skin, and the scene ends in a few hours or days quietly or in convulsions and dyspnœa—perhaps death, in cases where the urine is entirely suppressed, being hastened by uræmic poison, as evidenced by convulsions. When the attack is not so sudden, the stools at first, except in being fluid, differ but little from those in health, the odor being fæcal; generally, how-

ever, as the malady advances, they assume a very offensive, musty character, and so peculiar as to be almost pathognomonic. Occasionally the stools are nearly odorless, and may vary in number from four or five to twenty or thirty in twenty-four hours. They are composed, after the fæcal matter has passed out of the intestinal canal, of serum and mucus and changed blood, with now and then a little bile. Sometimes green masses and shreds are met with in the stools, the color of which, according to Golding Bird's explanation, is due to the presence of altered blood and bile pigment. Unchanged blood is never met with in the dejections of cholera infantum. There is nothing peculiar in the matter vomited. It consists at first of whatever food is in the stomach, and afterwards of mucus, with now and then bile.

The morbid anatomy of cholera infantum has been studied by many pathologists, among them J. Lewis Smith, Horner, Hallowell and Stewart, of this country, and Barthez and Legendre abroad. Their observations, when analyzed, go to show that from no perceptible lesion in any organ, to that of the most severe inflammatory action of the gastro-intestinal canal, is to be found—the large intestine being the principal seat of the changes that occur. These changes grade from the simplest hyperæmia of the mucous membrane in patches of a less or greater extent to diffuse softening. Lesions of Peyer's patches and the solitary follicles of the large and small intestines are among the most common that are met with. They first enlarge and become white, then of a rosy or yellowish hue, then soften, and ulcerations follow—the intermediate intestinal mucous membrane showing inflammatory action, or induration takes place instead of softening. Sometimes pseudo-membranous deposits are met with upon the follicles and ulcerated spots. The brain, lungs, liver, kidneys and all the other organs seem healthy, and it is now granted by our best authorities that this is one of the most violent inflammatory diseases to which children are subject, and that it is confined to the gastro-intestinal canal. It may end either by resolution, induration and thickening, softening and suppuration, ulceration or gangrene—sometimes all the coats of the intestines being impli-

cated in the later stages of the morbid action; and, again, the mucous coat alone suffering, the latter being the usual extent of the inflammation.

Many careful observers—among them Rilliet, Barthez, Sedgwick and others—have given the opinion that in the blood and the ganglionic nervous apparatus of organic life is found the first change from that of health. Indeed, they have shown good reasons for the opinion that in the pathology of this disease the nervous branches that come from the sympathetic, and go and are distributed to the intestinal canal, suffer first. For when these branches have been cut, as has been done by Moreau and Asp, a flux of serum takes place in the bowel. The normal action of the mucous surfaces being reversed, instead of taking up the fluid contents of the intestines by absorption or endosmosis and carrying it to the circulation, so that tissue waste may be repaired, that action gives place to an opposite current, by which the watery constituents of the blood pass with great rapidity into these cavities, and constitute the rice-water stools. Now, as we know that no fluid can pass through the walls of the blood vessels while they retain their integrity, and that sufficient time has not elapsed for the coats of these vessels to have suffered from inflammatory changes, we are driven to the theory that the disease now under discussion is primarily a nervous one, and that these flood gates to the circulation have been unlocked by a perturbed action of the nerves that supply them.

The etiology of cholera infantum is due to hot weather, unwholesome food, bad hygienic surroundings, and an unhealthy atmosphere poisoned by gases from the decomposition of the offal incident to large cities, or by the crowding and unhealthy surroundings of tenement houses. Cholera infantum is, therefore, much more frequent among the poor in such places than in other parts of the city among the rich, where cleanliness and hygienic rules are better observed, and a predisposition also exists on account of dentition. Last, but not least, in the etiology of cholera infantum, is malarial poisoning, or it is a type of malarial fever. It has been my lot for fifteen years to live in a country where

this fever is endemic, and I have, with others similarly situated, recognized its three prominent or usual types or classifications, namely, the intermittent, remittent and continued; and from these, branching off in every direction to almost every shade of disease—from the algid form of fever to the simplest pain (it may be in a tooth or finger or toe), recurring at stated intervals.

It may not be amiss in this connection to give the history of two cases under my care in the same family:

The first was a child three years old, who was taken sick on the night of the 19th of August, 1879. I found the child with cold extremities, sunken eyes, pinched features, and quite pulseless, tossing from side to side, cramps in the legs and arms, retching and vomiting constantly, with continuous rice water evacuations—in fact, in a collapsed state, what I then thought was the collapse of sporadic cholera. It did not occur to me at the time to connect these symptoms with malaria. I treated the patient as I would for sporadic cholera, at once giving one-twelfth grain of sulphate of morphia hypodermically, and stimulating local applications were used by rubbing, etc., and I attempted to give stimulants internally, which treatment resulted in an amelioration of the bad symptoms towards morning. I was encouraged to believe that a recovery would follow; but the next night about the same time the child was taken the night before, he grew worse, all the bad symptoms returning, and he died before day.

I then thought, much to my mortification, that I had made a mistake in the diagnosis, and determined that if the emergency arose again I would use quinine, and give the patient the benefit of the doubt.

In less than one week the other and only remaining child in the same family was taken sick in the night. This child was eighteen months old. On my arrival, I found a duplicate of the first case. So much, indeed, did this case again resemble sporadic cholera, that I hesitated to treat it in any other way, and for some time doubted if it were right for me to take the responsibility of using other therapeutical measures than what had been used before. But remembering the unfortunate ending, and my misgivings and regrets in the other case, I injected in the cellular tissue of the thigh five grains of sulphate of quinine, dissolved in water with a few grains of tartaric acid, and one-sixteenth of a grain of

sulphate of morphia. In about one half of an hour the radial pulse was perceptible, and more warmth was found in the extremities. I enjoined perfect quiet, and directed that the child should not be disturbed except to give water or pellets of ice, or to attend to the changes necessary for comfort and cleanliness, and went away, with the promise to return in a few hours. On my arrival, three hours afterwards, I found the child with fuller pulse, and the capillary circulation much improved, and resting better, the stools not so frequent, and the vomiting and retching less tormenting. The temperature at this time, taken in the rectum, was 108° , notwithstanding which I again gave the quinine and morphia hypodermically, and directed the child to be sponged every half hour with ice water and vinegar, and enjoined perfect quiet and non-interference as before. On my return in three hours, I found a full radial pulse, the extremities warm, vomiting and stools less frequent, temperature taken again in the rectum, 104° . The quinine was given as before, and at 4 P. M. was repeated, making twenty grains of sulphate of quinine and one-quarter of a grain of sulphate of morphia given hypodermically in twelve hours, to a child eighteen months old. The temperature in the rectum at this time was 101° , capillary circulation was good, radial pulse full but soft—one hundred and twenty beats to the minute—bowels having acted but twice during the day, stomach quiet and features less shrunken and anxious. No other medicine was given during the night, and the child rested well and had no relapse. The next day, quinine was given in five-grain doses until twenty grains were taken *per orem*, after which the child made a rapid recovery without a single accident, and with but little, if any, further treatment.

I could report a great number of cases similar to these, but presume that it is within the experience of every practitioner, who has lived within a malarial country, to have met them. I insist that the opinion is well founded that malarial poisoning is the main factor in the etiology of cases like these; but I would not have it understood as my opinion that it is so in every case of cholera infantum, or even in the majority of cases, for I have very frequently seen children with cholera infantum die during the prompt and scientific administration of quinine. I only desire, by calling attention to these cases, to point out the indication and to offer

the suggestion that very many of them will certainly perish without such treatment.

But again, I think that in many cases of cholera infantum quinine does not only do no good, but, on the contrary, positively does harm. It is only in cases of a malarial origin that we may expect benefit from it; and if the physician is so fortunate and skillful a clinician as to make the distinction, many of these little sufferers would be saved where otherwise they would invariably perish. Nor do I intend to convey the idea that I think quinine alone must be given in such cases, but that it is the one remedy above all others upon which we must rely, and on which the life of the patient depends. There are many other remedies which may be given with great confidence in conjunction with quinine, some of which I purpose to discuss under the head of treatment.

The diseases with which cholera infantum is likely to be confounded are Asiatic or sporadic cholera, tubercular or simple meningitis, and sun stroke; but generally, with the exception of the first, the distinction can be easily made. Laube, in the seventh volume of *Ziemssen's Cyclopædia*, says that the diagnosis between sporadic cholera and Asiatic cholera—even on the *post mortem* table—can not be made; and I would call to mind the fact that Laube means here by sporadic cholera what is generally understood in this country, and in Europe as well, as cholera infantum. He describes the two diseases under the same head, and uses the names cholera infantum and sporadic cholera as synonymous. However, I apprehend that, practically, it would make no difference, for the treatment would be the same in either case, unless it be in those malarial cases spoken of above, where it would be of vital importance to make the distinction. Dr. J. Lewis Smith also says, in his *Treatise on Diseases of Children*, “that the diagnosis between Asiatic cholera and cholera infantum is difficult, if not impossible.” In meningitis, constipation is the rule, and when diarrhœa and vomiting do occur, they are slight compared to that of cholera infantum, and are always cerebral, no lesion being found on the *post mortem* table in the gastro-intestinal canal; but inflamma-

tion—tubercular or simple—in the meninges of the brain and cord. In cholera infantum, head symptoms, if they exist at all, such as convulsions and sopor, generally make their appearance in the later stages of the disease, while in meningitis such symptoms are the first to be observed. From sun stroke it may be differentiated by its more gradual approach, less intense and later appearance of head symptoms, and finally by *post mortem* examination—the one showing inflammation of the gastro-intestinal canal, without brain lesions; the other, hyperæmia and fullness of the vessels of the brain without gastro-intestinal lesions.

The prognosis is indeed a gloomy one, and one which should be most guarded. Death may occur in a few hours, or be postponed for some days, or the attack may end in ordinary entero-collitis, from which the child may finally perish by marasmus.

As to treatment, it is to be remembered that we are dealing primarily with an active depletion, due to the exudation of the watery constituents of the blood through a lesion of the nerves that supply the stomach and intestines; and secondarily, with an intense inflammatory action of the gastro-intestinal canal. To my mind, there are three leading indications to be observed, namely, first to remove all cause of irritation, next to change the perturbed condition of the nervous system, and thus shut down the flood gates through which life ebbs away, and then, as in fractures of broken bones, to place the injured or inflamed parts in a state of as complete rest as possible.

If there be reasonable grounds to believe that there are irritating substances in the stomach or intestinal canal, they can be dislodged by emetics and cathartics; and those are to be selected which will do the least violence to the already hyperæmic or perhaps inflamed gastro-intestinal canal. Hence, I would prefer ipecac wine to dislodge from the stomach offending ingesta, if it is known to be present in that viscus. If such ingesta has already passed into the intestinal canal, I would preferably rely on castor oil as being less irritating than anything else for its removal.

But if there be nothing of a foreign nature in the stomach

or intestines, I would suggest that at once the attention be directed to meeting the second and third indications as pointed out above; and, indeed, I am inclined to think it might be well to do so from the first, without waiting to give emetics and cathartics, notwithstanding they may be indicated; for much time, in which the patient is still sinking, is lost by their administration. We are now to correct and change the abnormal and perturbed condition of the nerves, and give rest to the inflamed and injured parts. In fact, we are to treat them as though we were dealing with a broken limb, and at the same time we must turn our attention to bringing about reaction, and afterwards of subduing the inflammation that will follow.

To fulfill the two first, namely, of changing the perturbed nervous action, and giving rest to the injured bowel, and re-establishing capillary circulation as well, I know of no remedy that I would give with as much confidence as morphia hypodermically. I do not mean to say that in every case of cholera infantum I would advise morphia given hypodermically, for there are many cases, and perhaps the majority of them, in which there is no necessity for it; but I do mean to say that in those desperate cases of collapse from the depletion by the frequent watery evacuations, and in other diseases with like features as Asiatic or sporadic cholera, cholera morbus, or in the cold stage of pernicious intermittents, I know of no remedy so potent for good. If, under such circumstances, it be given in a full dose, so as to profoundly affect the system, it may be most confidently predicted, as I have so frequently witnessed, that capillary circulation will improve, warmth will return to the extremities, peristaltic action of the intestinal canal will be at once controlled, and relief will be given to the gastric retching and vomiting.

To explain how morphia behaves so admirably under such circumstances, is a task I feel would be too difficult for me to attempt. I will give, however, an outline of what I believe a reasonable solution of its physiological action. When first given, unless it be in a toxic dose, its primary effect is that of a stimulant, the capillary vessels being dilated by the stimulus sent through the nerves supplying the part, and

secondarily contracted. I know there are other and contrary views on this subject, but this opinion is in perfect accord with that of Molier and Hammond, and is demonstrated by the happy results that follow the administration of opium and its alkaloids in meningitis and peritoneal inflammation. It has also been demonstrated by Molier and Hammond that in sleep we have cerebral anæmia, and that by the administration of opium and its alkaloids, we, through their secondary effect, produce anæmia of the brain; hence, sleep follows, and hence it is that improvement follows the administration of this remedy in the diseases above spoken of; and hence it is, or rather to the primary effect of opium, is due the happy results, when given in the first or primary stage of the disease now under discussion, and to its secondary effect or power of contracting blood-vessels is due the subjection of the inflammation that follows after reaction has been established. In other words, the physiological effect of opium is to contract blood-vessels, and by thus preventing the blood from entering inflamed parts, subdues the morbid action. For these reasons, I would give opium, or some of its preparations, in the first stages, but with great caution, if at all, in the last stages of this disease. Not that I would fear it would produce congestion of the brain, for, indeed, I believe that when grave cerebral symptoms are seen they are due to anæmia rather than hyperæmia of that organ; for they are usually met with in the later stages of the disease, when we know that the same pathological condition exists as is found in active hæmorrhage. The system is depleted and exsanguined by the serous discharges that have taken place. And finally, *post mortem* examination sustains this theory, for the brain is found without any evidence of congestion—its vessels being empty. Now, if this theory be correct, and the theory advanced above of the physiological action of opium, be the true one, it is very plain that this remedy in the later stages of cholera infantum, is contraindicated; for it increases the anæmia of the brain already existing, and this causes the convulsions and sopor.

With a view of giving further relief to the gastro-intestinal trouble, I would advise cloths wrung out of hot water,

or, better still, spongiopiline dipped in hot water, or poultices made of spices, or weak mustard cataplasms applied to the stomach and bowels. As a medicine *per orem*, I prefer sub-nitrate of bismuth, with creosote and tincture of opium deodorized—the bismuth in ten or fifteen-grain doses, frequently repeated. Towards the last, the opium is to be given with great caution. Or we may combine the aromatic spirits of ammonia in the formula, or pepsin may be given with the bismuth and tincture of opium, in five-grain doses, or powders of bismuth in ten or twelve grains, with Dover's powder, or compound powder of chalk and opium, or the salicylate of calcium, as recommended by Dr. Alexander Hutchings, of Brooklyn, in three or five-grain doses. Some one of these combinations may be given every two or three hours, selected according to the preference or taste of the physician. While this is being done, if reaction is well-established, and if the fever be of a very high grade, we may resort to Ziemssen's antipyretic treatment, namely, the cold bath. When the thermometer has reached 105° or higher, I have frequently seen from this treatment the happiest results. He directs to first have the water 85°, and after the patient is put in the bath, gradually cool it down to 70° or 75° by adding cold water. The patient is to be left in this bath until the temperature taken in the rectum is 100°. The bath is to be repeated as often as is necessary to control the fever. I prefer, however, a modification of Ziemssen's plan, namely, the sponge bath. This may be done with ice water without disturbing the patient, and will always be most grateful, soothing, and refreshing to the most nervous, and will admirably control the pyrexia if repeated sufficiently often. In the meantime pellets of ice or ice water may be allowed in reasonable quantities. All food must be strictly forbidden, or, if allowed at all, let it be confined to milk and lime water, or oat-meal boiled down to a mucilage and strained. Of course, after the attack has lasted some time, appropriate nutriment must be given methodically and persevered in.

If the strength needs support on account of the enfeebled action of the heart, stimulants must be used. Good whiskey

or brandy is to be preferred, in small doses, frequently repeated. After the acute stage has passed, and the symptoms continue in a chronic form, then we must resort to the vegetable astringents, as catechu, kino, etc.; or we may give nitrite of silver as in the following:

R̄. Argenti nitras.....gr. $\frac{3}{4}$
 Aquæ distillat.....ʒj.

M.—S.: Teaspoonful every two or three hours.

Or we may continue the bismuth and pepsin, and when all inflammatory action is subdued, we may give iron, as suggested by Prof. Smith, as in the following:

R̄. Tinct. colombo.....ʒ ij
 Liq. ferri. nit.....gtt. xxvij
 Syr. simplicis.....ʒij

M.—S.: Teaspoonful three or four times a day.

I would particularly recommend the last prescription. The colombo has seemed to me to exercise a most favorable influence on the intestines under such circumstances.

But apart from this treatment by medicine is one no less the duty of the physician to direct; for let medical treatment be ever so skillfully ordered, and directions ever so promptly and obediently observed, the little patient will still linger in a doubtful condition, without any satisfactory advance towards recovery, unless a change is made in his or her surroundings. Therefore, as soon as sufficient strength is regained, the child should be removed to some healthy mountain locality, where pure air and wholesome food, suited to the enfeebled digestive power of the crippled organs, may be had; or a seaside sojourn may be enjoined, where pure water and salt breezes may be enjoyed. The idea is to remove the sufferer from the contaminated atmosphere, the unwholesome water, the narrow, contracted view of sky and sun, which alone are to be had in the midst of a great city, to the fresh, pure mountain air, soft sea breezes, pure spring water, unobstructed view of sky and sun, and wholesome and appropriate food. It is wonderful how these thin, puny, shrunken little sufferers will fill out and grow robust and strong in a few weeks or months, where such changes are made. The food must be suited to the necessities and re-

quirements of each individual case. I have found, in addition to the food usually given, and with which the profession is thoroughly acquainted, wheat flour boiled in a bag for some hours and then grated into milk, very palatable and also nutritious. I have also found, as Emmet, in his *Gynæcology*, directs (and from which I received the suggestion), the fat rib of a hog, boiled for some hours, easy of digestion and more nearly approaching cod liver oil than any other food. It is taken eagerly by the child, and is not repulsive to the most delicate stomach. I have frequently used it, not only for these cases, but in all cases where the great indication was to build up and repair tissue waste. Of course, many other things are quite appropriate for food, but these are familiar to all, and therefore I forbear to mention them.

I might go on and discuss the treatment of this disease by mercurials and similar remedies, which I know are regarded with great favor by many practitioners for whose opinions I have the highest respect; but entertaining the views of its pathology as expressed above, it would be contradictory for me to endorse this treatment. This opinion agrees, too, with that of Dr. J. Lewis Smith, as expressed in his *Treatise on Diseases of Children*. His language is, "Certain physicians believe that calomel in small doses and often repeated has a beneficial effect in choleraform diarrhœa; but those who use it employ it in combination with opium, and it is probable that the good effect observed is mainly due to the latter remedy. From the anatomical character of cholera infantum, there is apparently no indication for a medicine that affects the liver, and there is no evidence that calomel exerts any good effect on the follicular apparatus of the intestines, which, so far as we can localize the disease, seems to be most at fault of any part of the digestive apparatus. On theoretical grounds, therefore, I should oppose the employment of this agent; and my observations of its effect have been such that I entirely discard its use while we have other safe and efficient remedies to meet every indication.

Not being able to recognize a lesion of the liver or any other organ except the gastro-intestinal canal, and that of an inflammatory nature, and believing, as Prof. Flint teaches in

his *Physiology*, that bile is a stimulant to the intestines and increases peristaltic action, and that under certain circumstances, especially when its secretion has been increased or excited by the exhibition of calomel, it produces severe griping pains in the bowels, as taught in the United States Dispensatory, when speaking of the action of calomel, and it being claimed and generally admitted that mercurials increase the secretion of bile, I cannot give my consent to, or recognize the propriety of, administering mercurials in this disease. It seems to me these are most theoretical grounds against the practice.

In conclusion, I hope the above ideas, to which you have so patiently listened, may draw out and promulgate others in the discussion more rational and more to be relied on.

ART. III.—**Co-Existence of Puerperal Peritonitis, Erysipelas and Diphtheria.** By E. MILLER, M. D., Florence, S. C.

Mrs. A., primipara, æt. 30, was taken in labor at 12 midnight on the 12th of July, 1881, and was delivered of a male child at 12 o'clock, July 13th. Nothing unusual occurred during the process of parturition, except that it was what is known as a dry labor, the bag of waters having broken before my arrival.

The sketch of the personal history of the patient's surroundings will be necessary to a proper understanding of what followed. Her husband had been under my care with chronic dysentery during the winter and spring previous, and had occupied the same room in which she was confined, except for a few weeks at a time, when he had been advised to change air. His friends advised him to visit Wilmington; afterwards (in May) he went to Charleston, and died there on the 1st of July—twelve days before her confinement. He had occupied this room of 12x14-9, with her. It was carpeted and had quite a number of household articles beside cases of drawers, trunks, etc., containing wearing apparel up to the time of his leaving for Wilmington the 20th of June, after which a lady friend mostly stayed with her; but without making any change in the hygienic surroundings. In this place, without change of arrangements, I attended her in the labor mentioned. Perhaps three months before her confinement I had occasion to pre-

scribe a cooling laxative of sulphur and cream of tartar, which was used occasionally afterwards as circumstances required. Once or oftener complaint was made of pain in the right ovarian region, which was not considered of sufficient importance to require special medication. Slight œdema of the lower extremities and puffiness of the face was observed by her mother, who came on to be with her, about the 2nd of July. On the third day after the birth of the child fever came on, but did not entirely subside, notwithstanding the lacteal fluid was secreted in sufficient abundance—indeed, more than the child could consume—and the lochia sufficient. On the fifth day, the fever had increased; the lochia had nearly subsided; the milk was disagreeing with the child, which was given to a wet nurse, and a young pup was brought into requisition to draw the breast of the mother with satisfactory results. Pain developed in the right ovarian region, with considerable tympanites over the whole abdomen. Means were resorted to for the restoration of the lochial discharge, with partially satisfactory results. Her fever nearly subsiding on the seventh day, the child was restored to the breast. She still, however, complained of the right ovary, and tympanites continued unabated; lochia became scanty and offensive; on the following day fever increased. The child was again removed from the breast; ice and iced water used freely—the latter by sponging the surface. Dr. James Evans now saw the patient with me, and she had a vaginal injection of a two per cent. solution of carbolic acid with ten grains of quinia and one-fourth grain of morphia every six hours *per orem*. Stupes of turpentine over the abdomen; cold sponging generally, and ice *ad libitum*.

On visiting the patient on the 11th, the colored nurse met us with a distressed countenance, and exclaimed, "Doctor, she has turned wrong side out," pointing to the pelvic region. The representations were such that we deemed it necessary to request an ocular inspection of the parts, which we found had been invaded with erysipelas, involving the whole external genitalia. Piles had also protruded to the size of a walnut, and all the parts were greatly inflamed, and the inflammation was extending to the buttocks. I noticed a white spot, about the size of the thumb-nail, near the fourchette on the right labia, and a smaller one existed on the opposite side. At first these spots were not thought to be of much consequence, and, to enable us to restore the piles, which were extremely sensitive, an aqueous solution of extract of belladonna was frequently applied by means of

cloths and kept moist. These local applications were a great comfort to the patient. She was now given gtt. xxx, muriated tincture of iron every three hours, ten grains quinia three times a day, and pressed with the most nourishing and digestible foods. The tympanites and tenderness heretofore existing in the abdomen had now almost entirely subsided, but her fever and discomfort had not. Her symptoms grew worse as the erysipelas extended day by day, involving one portion of her system after another until one-fourth of her entire body was covered by it. The white patches kept pace until both labia were involved to the extent of three and a-half by one and a-half inches, tapering at each end. A closer inspection showed it to be a diphtheritic membrane a little thicker than an ordinary blotting pad. That eventually fell off in flakes of an inch square and smaller, the first appearing to be the first to fall, and *vice versa*. By the day of her death (which occurred on the 4th of August), all the membrane had entirely disappeared.

The details of temperature, pulse, respiration and treatment have not been given, not being essential to the object in view. The presentation of a case of puerperal peritonitis, erysipelas and diphtheria, occurring in the same patient, originating in her own room, the result of inflection, the unusual character of this case, its complications and violence, led me to look for parallels in the medical literature to which I have access.

In the July number (1875) of the *Obstetrical Journal of Great Britain and Ireland*, there is reported an exhaustive discussion at a meeting of the Obstetrical Society of London, June 2, 1875, on this subject, in which Priestley, Savage, Farre, Hix, Barnes, Tilt, Playfair and others joined. In the course of his remarks, the latter said: "Then there is diphtheria. We do not see so many cases of diphtheria, so we cannot judge of it; but I may remind you that the most brand new theory of puerperal fever—that of Dr. Martin—is that puerperal fever and diphtheria are the same thing. I saw, within the last few months, a case remarkably illustrative of the influence of diphtheria in producing a disease I was unable to distinguish from puerperal septicæmia. A newly-married couple, at Notting Hill, had gone into a new house shortly before the confinement of the lady. The house

was in a most unhygienic condition—an untrapped drain opening into the bed-room, with an untrapped pipe from the drain and a gully under the window giving off offensive smells. The patient had an attack of intense septicæmia, from which she barely recovered with her life. The husband at the same time was laid up with a well-marked acute attack of diphtheria—the lady patient presenting no symptoms of diphtheria, while yet the husband was nearly dying. Who could rationally disbelieve that those two diseases were produced by the same septic poison? I do not think there could be any doubt about it.”

In Vol. II, No. 2, of the *American Journal of Obstetrics*, April, 1878, will be found a parallel case in many essential particulars, related to the New York Obstetrical Society by Dr. H. J. Garigues. He says his patient was affected by two grave puerperal diseases—eclampsia and diphtheritic endometritis and colpitis. Further on, in the same article, he says: “The diphtheritic inflammation was, in this case, the more serious of the two affections, and threatened both the life and conformation of the patient.”

On Wednesday, 6th of July, 1881, Dr. Galabin reported before the Obstetrical Society of London a somewhat similar case (see *American Journal of Obstetrics*, October, 1881, page 911–2) that had been seen by him in consultation with Dr. R. A. Wallace. She was also seen by Dr. Hix, Dr. Taylor and Dr. Goodhart. The latter made the autopsy. (Dr. Taylor diagnosed the condition as being almost certainly diphtheria.) Pus was found in the veins near the cervix, and pyæmic abscess in the lungs. The membrane on the pharynx contained a mycelius fungus, which Dr. Goodhart considered merely a thrush. The author was rather inclined to consider it of a pseudo-diphtheritic character, secondary to the pyæmia and analogous to the membrane seen on the pharynx in some epidemics of virulent puerperal septicæmia. Dr. Godson believed the disease was septic and not the thrush of a moribund woman, as suggested by the autopsist.

On the 28th of August (twenty-four days after the death of my patient), a child of the next door neighbor was taken with diphtheria. This family had free access to my patient

at all times, and was often in the house, from whence it was doubtless contracted. The characteristic membrane was recognized in the throat, but the little patient recovered. No other case occurred in town.

Clinical Reports.

A Case of Extensive Dislocation of the Liver and Heart following a Railroad Accident. By W. T. SAWYER, M. D., A. B.,
Ex-President Medical Association of Alabama, etc., Whistler, Ala.

The case I wish to report is one of some interest from its rarity, as well as from its nature. I will first give a brief sketch of the prior condition of the individual who became the subject of this accident. He was a railroad engineer, and a large, strong man. Some years before this accident, he had suffered a severe attack of carditis (peri- and endo-carditis) and pleuritis of the left side, with some effusion into the pericardium and into the left pleural sac. He came out of this attack safely, and without any permanent damage that could be detected, except some adhesions of the pleura to the upper chest walls, the effusions having been slowly absorbed. A year afterwards he had a second attack of carditis, from which he did not make so fortunate a recovery, as from stubbornness and disobedience to medical advice, he brought upon himself a relapse by getting out of bed and going out on a cold, bleak day to the railroad shops to secure a new engine which had been promised him. It was with difficulty he got back home, and fainted after his exertions. After his relapse he was without any medical advice.

Some months after this, I had occasion to examine him for life insurance, and rejected him on account of a very distinct mitral regurgitation, and a very feeble, irregularly-acting heart, slightly hypertrophied at that time.

His history at that time illustrates the danger of "*pain-shock*" upon a feeble and damaged heart. He came near losing his life in an attempt to have a tooth extracted by a skillful dentist, becoming nearly pulseless for a long time, and was recovered only by the diligent administration of quick, diffusible stimulants and heart tonics. Had chloroform been given him to moderate anæsthesia, and had death occurred from the additional depressive effects of chloroform, which likely would have happened, his death would have been

attributed altogether to the chloroform, instead of to the shock of the operation upon a weak and disabled heart.

Although chloroform removes the perception of pain, it does not take away nor prevent the shock of operations, and deaths are often attributed to chloroform which are due to the shock of operations or injuries upon a feeble and injured heart.

After this time our patient improved in general health and resumed his employment as engineer, compensating hypertrophy of the heart having been established.

Whilst running his train at high speed, he suddenly found himself about to collide with another train also running at great speed, and he jumped from his engine. He lit upon his feet, receiving a tremendous jar, and then pitched forward, striking his left chest against a cross-tie, being the disabled side, which was the seat of the former pleurisy. I saw him about an hour after the accident. He was coughing up a little blood, and there was hæmorrhage in the left pleural cavity. I could only hear air enter the upper part of the left lung. I made no further examination, as he said he was not much hurt and declined all medical treatment, and no physician saw him afterwards.

He is reported by his family to have suffered with dyspnœa and faintness for some days, but had no treatment except domestic remedies—mustard plasters, rubbings and stimulants.

When I saw him again after some months, his left pleural cavity was filled with effusion and his left lung was compressed against the chest walls, and no longer breathed. His heart was pushed over to the right side, and its impulse could be seen and felt one and one-half inches beyond the right nipple. The liver was dislocated downwards until its anterior border was recognized by sight and felt two inches below the umbilicus. Its anterior border moved up and down with every breath, rubbing against the muscular abdominal walls (a little like a horizontal door moving upon its hinges). The diaphragm was dragged downwards by its attachments to the liver, and pushed downwards by the accumulation of fluids in the chest cavity. The right lung breathed in a long, narrow space, and in its expansion reached the lower ribs. His system seemed to have adapted itself to the abnormal position of these important organs, and he continued at his work for three years, making a short run of thirty-three miles in the morning and thirty-three back in

the evening, as his daily duty. After three years of enfeebled life, his health gave way entirely, and he had himself brought down and placed in my care for treatment.

He had constant fever, but was not very high—temperature $101\frac{1}{2}^{\circ}$ to $102\frac{1}{2}^{\circ}$. He was somewhat jaundiced. The actions from his bowels exhibited dark, vitiated bile, and were very offensive. His appetite had failed entirely, and he had become weak and ill. His urine was loaded with bile pigment and very dark-colored, but with no albumen and no blood corpuscles. The central anterior part of the right lobe of the liver was exceedingly painful to the touch, and the whole gland seemed enlarged as well as dislocated.

His stomach would not tolerate any diuretics nor digitalis. Under a course of minute doses of calomel (one-fourth of a grain two or three times daily) and quinine, and a milk diet, the actions of his liver became healthier, as shown by the improved color and character of the feces; the urine became normal in color; the appetite improved and the digestion became much better. The daily fever ceased and he regained a little strength.

From the great sensitiveness of the anterior part of the right lobe of the liver, and the hardness surrounding this painful spot, and from the general enlargement and *diminished secretions* of the gland, I concluded that there perhaps existed an abscess, though no fluctuation could be felt. Induced further by the representations of Dr. Sims of the slight character and small risk of liver aspiration, I requested an experienced and eminent practitioner, Dr. E. P. Gaines, of Mobile, to examine the patient with me, and, if he agreed with me, to aspirate the liver. It was thought best to aspirate the liver. This was done without finding pus or abscess.

The left pleural cavity was aspirated at the same time with better success, several ounces (10) of serum and of blood-debris (the remnants of blood-clots) were withdrawn.

The heart moved an inch or more towards its normal position. A more complete aspiration of the pleural cavity could not be accomplished at that time, from the feebleness and exhaustion of the patient.

We did not find the aspiration of the liver so innocent a proceeding in this instance, as represented by that really eminent surgeon and accomplished gentleman, Dr. Marion Sims. The liver of our patient became at once harder and larger, and he suffered great pain in it for several days, and required the influence of morphine to ensure him any rest. The secretions from his bowels became again dark and

vitiated. Fever was also re-established and continued for several days. He then rallied and his fever subsided, but he gradually succumbed, and died two weeks later.

An autopsy to investigate the exact condition of the various organs of the body in this unique and interesting case, could not be obtained from his family.

I should have mentioned one other phenomena connected with this case, the cessation of the sounds of mitral regurgitation and the disappearance of the signs of hypertrophy of the heart after the extensive accumulation of fluids in the left side. Was it the effects of pressure that produced a change in the nutrition, and thus in the size of the heart, restoring the proper action and closure of the valves?

Thinking this case perhaps worthy of record, and interesting from showing how long a man may live and work with such important organs so dislocated from their normal positions, I have sent this hasty, imperfect account of it to the *Medical Monthly*.

Analyses, Selections, etc.

Treatment of Typhoid Fever.—Dr. C. Ellery Steadman, one of the Visiting Physicians to the Boston City Hospital, records, in the Third Series of the *Medical and Surgical Reports* of that Hospital (issued 1882), a very important analysis of the treatment of 1042 cases of typhoid fever, extending over a period of ten consecutive years, beginning January 1st, 1871. He premises by saying that the attempt to analyze the results of treatment in these cases, as taken from the Hospital records, has been “difficult, and the issue of the trial unsatisfactory. Most of the cases have had more than one form of treatment * * * and has differed in the several years and in the practice of the physicians in attendance.” The term “no treatment” covers all occasional medication, such as a sedative dose, or fever mixture for a few days, and a sponging now and then. Most of the deaths which happen under this heading are the moribund patients who had, if they could receive any relief, but an opiate or stimulant before they died. The rest of the deaths in this class are the cases which, apparently going on well, take a sudden turn for the worse, and die after vain efforts to rally them. This class, with the above exceptions, represents the mildest cases.”

Cases having no treatment, 371; died, 29; per cent., 7.8.

Cases treated by quinine, salicylic acid, etc., in doses of five grains or less three times daily, 94; died, 9; per cent., 9.5. These were generally mild cases.

Cases treated by quinine or salicylic acid in doses of 10, 20 or 30 grains—almost all bad cases—52; died, 6; per cent., 11.5.

Cases, mostly mild, treated chiefly by mineral acids, 31; died, 4; per cent., 12.8.

Cases, mostly mild, in spring months, treated by calomel (10 grains at night, and saline cathartic in morning), 37; died, 5; per cent., 13.2.

Cases treated by sponge baths, 167; died, 25; per cent., 14.9. These were chiefly mild, but included several bad forms of the disease.

Cases, generally of the severest forms, principally treated by tub-baths (when temperature demanded, at least twice daily for 3 days), 87; died, 16; per cent., 18.3.

Cases, largely most formidable sort, treated by alcohol (5ij or more of brandy, or 5iij or more of sherry, or a pint or more of champagne, daily), 202; died, 75; per cent., 37.1.

The Doctor believes that 600 of these cases would have done well without any other treatment than milk, with quiet and careful nursing. Of 500 others, very many have been saved by using remedies under close observation. In treating typhoid fever, the thing to know is, whether or not our patients need the application of remedies, as distinct from food and nursing. This knowledge is imparted by the rapidity of the pulse in all but a few cases.

During the 10 years, 192 of the cases commented on were under Dr. Steadman's care. On this experience he bases a few notes.

Patients seldom come in the Hospital before the second week; many are brought too late for care to be of any service. Contagion is not a cause of the fever. The proportion of fever among the Hospital inhabitants is no greater than in the houses outside. The disease resembles contagious diseases in usually exempting the patient from subsequent attacks; and when one says he has had just such an attack before, the possibilities of tuberculosis or other malady must be thought of.

Passing over the matter of diagnosis, the Doctor remarks that it is common to find, in the milder cases, the highest pulse and temperature on the day of admission or on the day after; often the highest temperature on the day of ad-

mission, and the highest pulse on the day after. This is owing to the moving and excitement of the patient, and is proof of the necessity of quiet in the treatment.

The disease is more dangerous in an intellectual patient—professional men and men in active business having a predominance of cerebral symptoms. Particularly as they near middle life are the cases difficult to manage.

The last quarter of the year, though furnishing most fever patients, is not the fatal season. As in all epidemics, the worst comes first. In the hot months of July and August the cases, though fewer, are shorter and more intractable.

As to treatment, in severe cases, the use of stimulants has been invariable. In 1871, with 37 patients and 8 deaths, hydrochloric acid was uniformly used, and to some extent in 1872, when cool sponging was employed with 2 deaths out of 25 cases. In 1873, when there was no death in 13 cases, no fixed line of treatment was adopted except sponge baths and stimuli in the worst cases. In 1874, the German plan of cold tub-baths was put in practice, and has since been continued. There were 3 deaths out of 24 cases; in 1875, 4 deaths in 25 cases; in 1876, 1 death in 13; in 1877, 1 death in 15 cases. In these four years the mortality was 11 + per cent. Two cases were moribund when admitted.

With regard to *cathartics*, most patients who enter the hospital have been purged, very many in a drastic fashion, with no special untoward result.

Use *stimulants* by the state of the pulse; if the beats are growing in rapidity and losing in strength, if they near 120, 3ss of spirits, or a glass of champagne may be given. If there be any doubt of the need of alcohol in a rising pulse, the influence of the drug on the circulation should be marked. If the pulse steadies or slows, wine is repeated on its rising. Some fever patients cannot be made drunk by all the alcohol you can pour into them, while others do not bear champagne in small doses. Twelve ounces of spirits daily is said to be all that the worst case needs, but this limit is constantly exceeded with favorable results. As the fever abates the amount is gradually lessened. Hard-drinking like this does not make drunkards, because patients so ill as to need this heroic stimulation have their senses so blunted as not to know whether they are drinking brandy or beef-tea. When the need departs, the natural indifference or distaste returns. A medical friend says that during his fever and convalescence he craved alcohol, and its use never affected his head. On return to health, he suddenly lost the morbid desire. Of

course stimulus given when it is not needed has its usual effects.

Quinine and salicylic acid have been used with good effect to lower the temperature and pulse—say 20 grains of quinine or 30 grains of salicylic acid have been given in two doses, the latter an hour before the usual rise of the thermometer and pulse—which reduces the temperature two or three degrees, and the pulse five or ten beats.

The tubs in the new wards are so arranged that the labor of giving a bath is greatly simplified. The patient's bed is brought alongside the tub; he is lowered on the sheet into the water, if he be feeble, with the minimum of exertion. Give a bath when the temperature reaches 103° F., and the pulse is 110; the water to be at 100° F., and lowered to 80° or 70° F.: ice may be used to effect this. Caution must be used if the fever is two or more weeks old. If he shivers, he is taken out and given ℥ss of brandy; if he does not, he is kept in 10 to 20 minutes, when his temperature will have dropped two or three degrees, or will do so in an hour after, and the pulse lowered some 10 beats. If the pulse does not come down, you may doubt if your baths are doing good; but if the patient enjoys them, I have seen no harm follow. The febrile action will then begin to increase, and in two hours more another bath will be needed, and perhaps another. Some patients resist the baths so as to antagonize their benefit; but we have alcohol to fall back on, with good results.

In all cases perfect quiet is insisted on, and the least kneading of the abdomen, tapping at the chest, vexing with questions, changing the linen, and fussiness, that human nature will permit. In private practice the hardest thing is to get your patient let alone. Let him drink a cup of milk every two hours, if he knows enough to do it; if he does not, it is administered like medicine. Milk is generally drunk more readily if iced, and thirst commonly induces the use of three or more pints daily. Some patients, mostly private patients, are averse to milk, which is made more palatable by the addition of gaseous waters. Others will take a gallon a day, and complain that they are starving. If our patient's pulse keeps below 120, nothing more may be needed. Beef tea is generally ill made, and furnishes less nutriment than milk; it often creates diarrhœa.

Diarrhœa requires, first, the *bed-pan*. A dangerous waste of tissue and strength is going on from the patient's rising to use the ordinary vessel. The symptom should be controlled if it amounts to more than three operations daily—which is

all I wish the patient to have—by the use of opium gr. j and sulphate of copper gr. $\frac{1}{4}$, every second operation.

If patient sleeps fairly, mild delirium requires no treatment; if any is necessary, Graves's pill of opium and camphor is often serviceable; his prescription of opium and antimony for furious delirium I have used, but think baths and stimulus answer better. With delirium, comes vigilance, which may be palliated by a sponge bath or a glass of wine; Dover's powder, if the skin is very dry, 10 or 15 grains of chloral, or 40 grains of bromide of potassium. Fierce delirium sometimes requires restraint, and if baths and alcohol be not required by other symptoms, then 15 grains of chloral, with 30 or more of bromide of potassium, every two hours, are frequently of use. I have had to attack intolerable headache, simulating meningitis, with a subcutaneous injection of morphia, gr. $\frac{1}{3}$.

Temperature and pulse ascending, the baths, stimulus, salicylic acid or quinine come into play, according to circumstances.

Meteorism is troublesome at times; I have used turpentine with less satisfaction than authorities promise; its application as a stupe, however, is quite useful; its great advantage at the time when the tongue cleans in flakes I have not observed; I have thought other stimulus more efficient. A typhoid patient requiring aspiration of abdominal gas is ordinarily too far gone, but the operation may afford comfort. If cough is annoying, and does not proceed from serious lung trouble, Dr. Bowditch's cough mixture relieves it. For epistaxis, I have had to plug the nares from behind. As the patient convalesces he is allowed light puddings, and soup and bread when he begins to tease for food. If temperature drops to normal for two days, with clean tongue and flat belly, and the pulse keeps up, it is the pulse of weakness, and calls for solid food and wine. Steak given too early, sitting up too soon or a few minutes too long, may send temperature and pulse upwards, and to make haste slowly is the best policy. Aitken says that a soldier is not fit for duty under four months after an attack; but our patients have to go to work much sooner than that.

Jürgensen by cold bathing at Keil reduced the rate of mortality from 15 to 3 per cent.; Liebermeister from 16 to 9 per cent.; Ziemssen and Immermann from 30 to 9 per cent. Brand reports 1,411 cases, with death-rate of 4 per cent., and a series of 170 with no deaths, as the result of cold baths. Dr. Edes records 66 cases (*Boston City Hospital Re-*

ports, Vol. II), with 11 deaths. To these I add 21 with 5 deaths, or 18 per cent. The practice has not commended itself to my other colleagues. The last two years I have given fewer baths, because the success has not been as great as was anticipated from the reports of German physicians. I have not been persuaded that cold baths and antipyretic doses of quinine shorten or cure the disease, although they reduce temperature wonderfully. Reduction of temperature is not all that is needed to curtail the disease. While patients die with no great elevations or high courses of temperature, and autopsies give no other cause of death than congestion or moderate ulceration of intestinal glands, it will be difficult to see how the amount of what we call "fever" decides the result. Although I continue to use cold baths and antipyretics in such cases as seem to demand their use, if I were restricted as to remedies, I should choose the sponge bath and brandy for my pharmacopœia.

Dipsomania: Its Causes, Beginning, Delayed Treatment, Curability, etc.—Dr. Lewis D. Mason, Consulting Physician to the Inebriates' Home, Fort Hamilton, Long Island, N. Y., after giving a full official "statistical report of 600 cases of inebriety" to the Legislature of New York, and after remarking on several cases and points of interest, draws the following practical conclusions, which will prove of value to all practitioners of medicine: The initiatory stage of dipsomania is usually formed between the ages of 15 and 35, the large proportion of cases being between 15 and 25.

This fact may be utilized in those instances where there are marked hereditary tendencies, by guarding the individual at this special time from the various exciting causes that he might otherwise be exposed to, and thus carry him over the dangerous period.

The majority of inebriates do not apply for treatment until the disease has existed a long time, in nearly all instances over five years, and in a large proportion of cases over ten years; often, during this period, organic disease, the direct result of the habitual use of alcohol, has undermined the system and the patient is beyond relief.

In no other disease is the treatment begun at so late a period as in dipsomania. This fact should be recognized when, as specialists, we are asked "if we make any cures?" Our reply should be, that notwithstanding the disadvantages we labor under, the proportion of cures we effect will compare favorably with those made in other forms of nervous dis-

eases; and, furthermore, when the profession and people at large shall recognize the value of early treatment and commit the inebriate to our care, under the same advantages and conditions as pertain to those diseases which are under the care of other specialists, we will show equal if not superior results.

As head injuries hold an important position among the exciting causes of inebriety, the duty of surgeons who may be called upon to treat this class of patients is clearly indicated. The prognosis should always include the possibility of dipsomania as a result of the fracture or concussion, and the patient earnestly warned against the use of alcoholic stimulants in any form.

The predisposition of certain individuals to inebriety should be uppermost in the mind of every practitioner, and he should never prescribe a course of alcoholic stimulants when a patient is so predisposed. In every instance, when he deems such a course of treatment necessary, he should carefully inquire into the family history and antecedents of the patient.

When it is decided to begin such a course, the quantity as well as the period should be definite. Before the patient is dismissed the stimulant should be withdrawn, either abruptly or gradually, as the case may demand, and the patient warned against the indiscriminate and indefinite use of alcoholic stimulants. Were some such course as this observed, the statements occasionally made by inebriates, that they first began the use of alcohol medicinally, would be less frequent. It is not an overstatement to assert that the average practitioner does not prescribe alcohol with the same care that he does other drugs in which he sees a possible danger of habituation, by their prolonged and irregular use; and yet the danger of this result from alcohol is much greater, because the patient cannot see any harm in that which he hardly regards as a medicine, but rather as a beverage.

Dr. B. W. Richardson, of London, in referring to the difficulties that surround the use of alcohol in general medical practice, recommends that it be dispensed as alcohol, and not as beer or wine, or in one of the many forms of alcoholic liquors. This has been the practice of the Inebriates' Home at Fort Hamilton during the past two years, and the result has been more satisfactory than the old method of administering alcohol.

Geum Album for Gastric Irritation and Headache.—Dr. W. A. Spurgeon, in *Therapeutic Gazette*, March, 1882, says, after a

botanical description of this plant, that it is already useful as an anti-emetic; that it relieves gastric irritation (from any cause) and headache. A teaspoonful of a tincture, representing eight troy ounces to the pint, is a dose, but larger doses may be given.

Can Dreams be Controlled?—The *Lancet* says that a French investigator, M. Delaunay, finds, from experiments upon himself, that the character of his dreaming may be controlled by stimulating various portions of the brain by means of heat. By covering his forehead with a layer of wadding he gets sane, intelligent dreams. He has also experimented on modes of lying, which favor the flow of blood to particular parts, increasing their nutrition and functional activity. He has observed that the dreams he has while lying upon his back are sensorial, variegated, luxurious. Those experienced when on the right side are mobile, full of exaggeration, absurd, and refer to old matters; but those produced when on the left side are intelligent and reasonable, and relate to recent matters; in these dreams one often speaks. These observations may be correct, so far as M. Delaunay is concerned, but most people who lie on their back, especially after eating, are apt to find their dreams anything but luxurious.—*Med. and Surg. Reporter*, July 15, 1882.

Treatment of Snake Bites.—W. H. Jolly, M. D., Whitleyville, Tenn., reports the following case in the *Southern Practitioner*, July, 1882: On May 8, about 10 o'clock, A. M., I was called in haste to see Harriet C., who was supposed to have been bitten by a rattlesnake, some two hours previous, while "digging" ginseng. Found the patient suffering considerable pain in the right foot and leg. Swelling extended as high as the lower third of the femur. Anxious expression of the countenance. Thirst great. There were two small punctures on the top of the foot. The surrounding tissue presented a mottled appearance. I injected in the wounds with a hypodermic syringe aqua ammon., gtts. xx, and ordered the following:

R_x. Gun powder ʒij
 Yolk of 1 egg.....
 Aqua ammon.....f. ʒij

M. Sig. Apply every two or three hours.

I gave alcohol in ʒij dose until I made my patient "gloriously drunk." Patient rested well during the night. Visited her next morning and found her resting easy. The leg

reduced to nearly its normal condition. Discharged the case without further treatment.

[*Apropos* to this subject we note that Retired Deputy Surgeon-General John Shortt, of the Madras Army, who has had experience in the treatment of snake-bites, etc., states (*Lancet*, May 6, 1882) that liquor potassæ is the antidote. It is to be combined with brandy, while local scarifications and the use of ligatures are not neglected. In severe cases, alkaline baths should be freely used.]

The Birth of an Elephant.—Dr. Gustavus E. Sussdorf, of New York, contributes to the July number of the *New York Medical Journal and Obstetrical Review* an account of the process of parturition as it took place in the case of the elephant "Queen" last February. The period of gestation was 597 days. There was no noticeable enlargement of the abdomen until it suddenly became quite prominent the day before labor began. This enlargement did not subside with the expulsion of the fœtus and after-birth, but continued four days longer. During the latter months the mammæ became swollen, and soon filled with serous milk. These were the only signs of pregnancy to be seen. The labor began at 3 P. M., February 2d. At this time the mammæ were greatly distended with milk, which came away continuously in drops. The vagina now began to drop down and swell. In a short time thick mucus began to come from the vagina in long ropy strings, and almost poured out just before delivery. From three until eight o'clock "Queen" was evidently uneasy, as she constantly moved her body from side to side, but did not seem to suffer *pain*, and quietly munched some hay up to the very moment of delivery. At 8:10 the young elephant was born, the head presenting, completely enveloped by the unbroken membranes. The head and part of the body rested between the hind-legs of the mother, and touched the ground. Waiting a moment, the mother ruptured the membranes with her two hind feet, when the young one rolled out on its back. The membranes were no sooner liberated than they quickly returned into the vagina. The umbilical cord had not been seen at all, having probably been torn away during the descent of the fœtus. The mother now quickly turned to the young, and, on seeing it, began to roar and bellow furiously, which she continued for ten minutes. As soon as she saw the baby she also at once placed one fore foot on it and rolled it several times, as one does a lemon under the palm of the hand, the bellow-

ing and roaring continuing. In a moment or two more she placed her abdomen under a short post in the ground, to which she was chained, standing almost upon her head, and grasping the post with her trunk, thus forcing the abdomen with great power against the post. "Queen" remained in that position for about ten minutes; then became quiet, and, while playing with her young, took some food. Nothing indicative of after-pains could be recognized after this, and in one hour and thirty minutes the placenta was expelled. With it there came about two quarts of clotted blood. There was no hæmorrhage either from the uterus or from the umbilicus of the calf. The duration of labor was five hours and ten minutes. The calf, a female, weighed 245 pounds, and stood just three feet high. It began nursing one hour and forty minutes after birth. It had two middle upper teeth. The umbilical chord entered the abdomen about three inches anterior to the vagina, and had been detached very close to the abdomen, as none was visible at that point, the canal being open and large enough to admit a good-sized finger for half an inch. Dr. Sussdorff remarks that there are several very interesting and instructive points in this history. First, the period of gestation is evidently not affected by change of climate and captivity, lasting about nineteen and a half months. The time of labor is short, and evidently there is not much pain. The sagacity of the animal is remarkable, as shown by the manner in which she ruptured the membranes, the means she took to excite respiration by rolling the young, and, finally, her effort to express the placenta from the uterus. He then describes the placenta and the fetal membranes, comparing them with those described by Owen, and adds a summary of various observations that have been made of the milk of the elephant as compared with that of other animals, giving drawings which show its microscopical characters in comparison with those of cow's milk.—*Boston Med. and Surg. Jour.*, July 20, 1882.

Treatment of Infant Diarrhœa by Charcoal in the Milk.—For children belonging to families in easy circumstances M. J. Guerin mixes a certain quantity of Belloc's powder of charcoal with each milk meal—half a teaspoonful only at each meal. For the children of the working classes, Belloc's powder, which is a little dear, is replaced by very finely powdered, farina-like, ground baker's charcoal. This powder mixes readily with milk, and children drink the mixture as though the milk were pure. In a very short time, some-

times on the first day, the stools change in consistence and odor, and instead of being green, become blackish-yellow. At the same time that this addition is made, M. J. Guerin dilutes the milk with one-third or one-half of sweetened water, and the children take it without repugnance or vomiting. M. Guerin has frequently seen children, exhausted by seven or eight days uncontrollable diarrhœa, regain in two or three days the expression of health.—*Lond. Med. Jour.*—*Weekly Drug News*, July 21, 1882.

Fœtus in Fœtu.—Dr. Lubimoff, Kasan, Russia (Vratchedomisti, No. 1, 1882), has recently reported an interesting case of this kind. He found on a little girl born at term and living, a perineal tumor of which the right half was hard and the left half soft. On autopsy there were found two cysts in the left half. The right half contained different portions of a fœtus, a well-developed foot with six toes, a rudimentary arm and a stomach. Between these two tumors were found small dermoid cysts containing epithelial cells, striated muscular fibre, bits of cartilage and bones containing marrow in the interior.—*Chicago Med. Review*, July 15, 1882.

Iodides of Iron and Potash for Bronchocœle.—Dr. David W. Cheever, in the *Medical and Surgical Reports of the City Hospital*, of Boston, Mass., 1882, in his striking report of surgical cases, states that, in cases of small enlargements of the thyroid gland—especially in their initial stages—he would urge the trial of at least six months' medication with iodide of iron and iodide of potash—the latter in cumulative doses—to absorb the glandular enlargement. "Experience has taught me that there is much to be hoped for by perseverance in this treatment."

Case of Pregnancy in a Woman at the Age of Sixty-two.—Cases of pregnancy occurring in women who have passed the half century, and more especially in one who has borne over a score of children, are undoubtedly of extreme rarity. Early on the morning of 29th November, 1880, Dr. W. John Kennedy, of Dalkeith (*Edinburgh Medical Journal*, June, 1882), was summoned to attend Mrs. M., residing in Back streeth, Dalkeith. Patient was sixty-two years of age, her catamenia had generally been regular (the last occurring in the middle of February), and she was in her twenty-third pregnancy. On arrival, Dr. K. found labor going on naturally, os well dilated, pains strong and regular, and the head

presenting. Having waited a short time, and finding that the expulsive powers showed no signs of rupturing the membranes, he punctured them, after which four or five pains sufficed to expel the child. The uterus contracted well, the hæmorrhage was normal in amount, and the placenta was removed within five minutes after the birth of the child. There was nothing particular to remark about it, except the unusual thickness and toughness of the membranes. The child was a well-developed, healthy male, and rather above the average size.

So far as the actual labor is concerned, there is nothing calling for observation, the patient having had a quick and comparatively easy confinement. The interest of the case lies in the woman's advanced age, the long continuance of menstruation, and the large number of children she had borne. To the medical jurist the case has further an important bearing on the question of legitimacy, as tending in some measure to determine the age at which a woman may bear a child, though, of course, it by no means proves that conception may not take place at even more advanced periods of life.

Mrs. M. (*née* Jessie Boyd) was born at Selkirk in October, 1818, or, as she says with evident pride, just three years after the battle of Waterloo. Her father was a major in the army, and she had been with him in America and India, and came home from the latter country at the age of seventeen. She was married in 1838, and her first child was born in the same year. Her husband was killed by an accident soon after the birth of the child. She married again about two years afterwards, and by her second husband had *nine* children (once twins) and two miscarriages. After the death of her second husband she again married, and by this third husband had *eleven* children at term, the last being born, as above stated, on 29th November, 1880. The child preceding this one was born at Arbroath in 1874, and between the two she had a miscarriage in November, 1878. During all this time she had, as a rule, menstruated regularly when not carrying a child.

Naturally, the first question which arises in one's mind is, are the *data* on which this woman's age is set down at sixty-two correct? In regard to this, Dr. K. calls attention to the following points in evidence:

1st. The statements made to him by the woman herself. These were given freely and explicitly, and the most careful cross-examination entirely failed in producing any contra-

dictions. Besides, there was no possible object to be gained by the woman fabricating such a remarkable history as that given by her.

2d. The fact that Mrs. M. was a nurse under Dr. K. in 1870, when she said that she was over fifty; and certainly she had quite the appearance of a woman of that age.

3d. The number of confinements which she had had at term, namely, twenty (one twin), with the addition of three miscarriages.

4th. The fact that in June, 1879, when her third husband applied to the parochial board at Selkirk for relief, he stated his wife's age to be *sixty* years, *i. e.*, sixty-one in the following October.

From a medico-legal point of view, Dr. K. ventures to think that this case presents some features of special interest. Whilst it is impossible to lay down a hard and fast rule as to the age beyond which a woman may not conceive and bear a child, still every well-authenticated case of pregnancy at an advanced age is of value, as showing how late in life a woman may have, and actually has had, a child. It may be said roughly that the child-bearing age in woman ceases between forty and fifty; but as impregnation may take place at exceptionally early periods of life, so it may also occur at ages considerably beyond fifty. In a table given in Taylor's *Medical Jurisprudence* (1865, p. 876), there are twelve cases quoted at ages from fifty to fifty-four. In the same work there is also a case mentioned in which a healthy woman bore a child at the age of sixty, menstruation having continued up to that time. Two others at sixty-three and sixty-five are noted, but their authenticity is doubted. He also gives two cases, recorded by Haller, in which women at sixty-three and seventy bore children.

The importance of accurately recorded cases of women giving birth to children at these advanced ages has a special bearing on the question of legitimacy. Suffice it to recall the well-known "Douglas Peerage" case (1767-69), in which the claimant's legitimacy was disputed *inter alia* on the ground that the reputed mother had passed the child-bearing period at the time of the birth, she being then in her fiftieth year.

Besides giving birth to a child at the age of *sixty-two*, there is another point in Mrs. M.'s case which appears to be of interest, *viz.*, the regularity with which she went on conceiving after she had passed the ordinary child-bearing period.

This will be best shown by giving in a tabular form the dates of her last seven conceptions:

Year 1865.....	Age 47.
“ 1867.....	“ 49.
“ 1869.....	“ 51.
“ 1871.....	“ 53.
“ 1874.....	“ 56.
“ 1878.....	“ 60 (miscarriage).
“ 1880.....	“ 62.

The only case of a similar nature which Dr. K. has been able to find is one quoted by Orfila, in which a woman had her first child at the age of forty-seven and her last at sixty, five others being born between these dates. (Taylor's *Medical Jurisprudence*, p. 875.)

The long continuance and general regularity of menstruation in Mrs. M. are also noteworthy. This function may be stated, as a rule, to commence about the age of fifteen, and to terminate about forty five. There are many instances, however, in which it has occurred at an earlier date, and it has even been observed in childhood. Similarly it has been noted as occurring at periods of life considerably beyond forty-five. The power of procreation may be said generally to run *pari passu* with menstruation, so that as long as the latter function continues in activity there is reason to infer that a woman may conceive. Cases in which menstruation has been observed late in life are frequently found not to have had the function established until long after the usual period for its commencement. Probably the most remarkable case of prolonged menstruation is that quoted by Orfila, where it continued until the woman reached the age of *ninety-nine*, the function having been established when she was in her twentieth year. In the present case the menses first appeared in India at the age of thirteen; and continued with remarkable regularity during the intervals of child-bearing.

The large number of children borne by this woman is also interesting, she having had *twenty-one* children at term, twins being borne on only one occasion. In relation to the question of fecundity in women, Dr. K. has heard of three cases in Somersetshire. In two of these the mothers were cousins, and had borne *twenty-four* and *twenty-five* children respectively, twins occurring on several occasions. In the third case a lady had ten children at term in the course of four-

teen years. All these were suckled by her (except the last), thus showing that conception may take place during lactation, and adding one more instance to disprove the popular notion usually entertained upon this subject.—*Amer. Jour. Obstet., etc., Monthly Supplement*, July, 1882.

Neuræsthenia or Neuratrophia.—This must be the day for the making of new words, or else for the resurrection of such terms as have become almost obsolete. There is, at present, very little that is new, in the sense of true scientific advance; hence, some of the best of authors of our country are making much to do about nomenclature. It may be well that there occasionally, at least, comes a time for dusting, sweeping, cleaning and getting everything that ought to be brushed up into a corner. To Dr. Geo. M. Beard, of New York city, the professional world has become indebted for the term which he has introduced, and for a description of the disease now known, the world over, as neuræsthenia (or nervous exhaustion). It so happens that the "Kalamazoo Hospital superintendent" had described the disease as "a form of nervous exhaustion, culminating in insanity." We have been, for some years, accustomed to the term *neuræsthenia*, as indicative of the condition, known, perhaps, better as "nervous exhaustion;" and we must confess that this nomenclature appears to us to be better; and the "culminating" conclusion at which Dr. C. H. Hughes, of St. Louis, Mo., arrives in his "Note on the essential physis signs of general functional neuratrophia or neuræsthenia," would have been better had it not been recorded. It seems that the "Kalamazoo Hospital superintendent" was a "Van Deusen, a Michigan insane asylum superintendent."

But Dr. Hughes is the Editor of a most excellent journal—the *Alienist and Neurologist*, of St. Louis;" and in the July number, 1882, we find our text for the above remarks. Whatever may have been our criticisms, relating to the nomenclature of the now generally recognized nervous disease, which is usually called "nervous exhaustion" in this section of country, Dr. Hughes says some things worthy of permanent record. In the hope of aiding him and the profession in this direction, we make the following excerpt from his excellent paper, excluding the bare reference he makes to the nomenclature. Speaking of neuræsthenia, he says:

But it is still possible to more briefly describe its distinguishing features than has yet been done. This brief de-

scription is possible through its characteristic psychic symptoms, some of which are never absent when the disease is present. We draw the picture solely from our personal observation of the disorder.

Neuræsthenia, differentiated from its complications, antecedents and gravest sequences, is a more or less general failure of the normal nutrition appropriating power in the higher nerve centres, especially the psychical, leading to consequences short of appreciable structural change—a pure neuratrophia which is only functional in its effects, and confined, in expression, to an altered and lowered functionation in the nervous system itself. The neuratrophia here is *solely* functional, not at all structural, so far as can be sensibly appreciated; whatever structural change may be conceded in neuræsthenia being merely conjectural and undemonstrable, except through theoretical deduction. Thus, we should restrict and circumscribe the term neuræsthenia, were we to use the term at all, but we prefer in its stead the more definite term, functional neuratrophia.

General functional neuratrophia is a state of nerve starvation due to causes inherent in the nervous system itself, having its appropriate symptomatic expression in nervous exhaustion and its immediate sequences, the chief and most significant of which are psychical. The psychical symptoms, however, are not to be ignored. The general tired feeling and sensation of inadequacy to the demands of duty in the presence of some accustomed and easily performed mental work, and the quick break-down which follows the attempt, even though not forewarned by a sense of insufficiency and weariness, are significant.

The transitory localizations of symptoms which appear in the progress of general neuræsthenia have led to such distinctive differentiations as cerebraesthesia and myalæsthenia, according as the symptoms appear most prominently in the head or spine; and the term *gangliæsthenia* has been proposed for ganglionic neuratrophia and, consequently, debility; but whether the heart, or the cord, or the brain functionate abnormally at different times, the brain always displays, early in the progress of this disease, evidence of the defective nutrition; and the failure is markedly in the vaso-motor centres, which, being inadequately nourished, permit of secondary morbid vascular states, which are often mistaken for the primary disease.

Neuratrophia is primary when a precedent anæmia is not

the cause; secondary and symptomatic itself, where blood defects induce it, but it is then not strictly entitled to be called neuratrophia.

General functional neuratrophia being so seldom entirely dissevered from cerebral debility from atrophic causes that the psychic symptoms contribute the most important, as they make the distinguishing feature, in its symptomatology; the latter are the special evidences by which we may often differentiate from graver cerebro-spinal and sympathetic system disorders, and need now claim our attention.

The panophobia, of Esquirol; the pathophobia or hypochondriasis, of the old writers; the toxiphobia, of old alienists; and Hammond's synonym mysophobia (the gravest of neuræsthenic psychic symptoms, by the way); the claustrophobia, of Ball; and its antipodal agoraphobia, of Maschede; the monophobia, panophobia, phobophobia, astraphobia, anthropophobia, and topophobia, of Beard; the gynephobia, of Spitzka; the sideromophobia, of Rigler; the agoraphobia, of Westphal, with Rosenthal's synonym of platzangst, and Benedikt's similar platzschwindel; the syphilophobia; hydrophobia (dread of large bodies of water, a natural dread in horses); thanatophobia or necrophobia and necropalophobia (fear of death and grave-yards); [What terms! We look in vain in all books on nervous diseases for most of them; Dunglison's Dictionary does not record one-third of them, and it is difficult, even with the aid of Liddell & Scott, to ferret one-half of them. What terms!] and the numberless other fears, needless here to name, not natural to certain persons, but which come upon them when neuratrophic ill-health overtakes them, are expressions of a certain psychical change, not at all limited by the special terms thus far coined to express them—not to be limited either by the many words likely to be constructed from Greek, Latin or Saxon languages by expert philologists.

It would be an almost endless task to enumerate the many morbid fears of the neuratrophic. Their name is legion to a mind fertile in verbal coinage, and some are even unnameable. For example, such singular morbid fear as that which takes possession of a naturally fearless man at the approach of a familiar face, and causes him to go away and hide himself; such unfamiliar fear to naturally brave men, of taking once delightful journeys, without rational cause for the newly awakened fear, save only in the state of the nervous system; the unusual fear and indecision which sometimes seizes once bold men without cause external to themselves, and partly

paralyzes their psychic centres in the midst of "enterprises of great pith and moment," which, in their best estate, they would, without hesitancy, have carried to successful issue, delighting in encountering and overcoming the real obstacles which their present feeble brains build in fancy too high to overcome. This is debility of brain, and the fears, forebodings of evil and morbid unnatural dreads of adverse consequences of ordinary mental movements are its characteristics, and associated with these are the timidity and irresolution or transitory, fleeting, or spasmodic decision supplementing the former natural firmness of the mind, apparent when the brain was strong.

The mental substratum underlying these unaccustomed morbid fears and dreads, and morbidly colored perceptions, conceptions and misconceptions, is timidity or irresolution and irritability of manner and speech not natural to the person, and this state of morbid feeling has not been reasonably acquired by any rational experience in the history of the person.* A change less marked, but none the less real than that which takes place in insanity, has come over the natural mental character of the victim of general functional neurasthenia. This characteristic change in his manner of thought, feeling or movement is noted by his friends, in marked cases, as well as by his physician. A degree of mental and nervous instability and irritability accompanies this timidity, and is the essential basis of the morbid fears the victim of functional neurasthenia feels. He weeps more easily and sleeps more difficultly than he used to. Nerve instability, mental timidity, dread and fear and easily hurt feelings, and, later on, illusion and hallucination. Later still, delusions obtrude, when insanity confronts us, of which general functional neurasthenia, with special cerebrasthenic expression, is a most frequent precursor in many organisms. But timidity underlies the morbid fears, as, later on, the hallucinations underlie the culminating delusions.

This fact has not been noted by others, and it is the most important fact to the general practitioner, for the initial stage of *unnatural timidity and irresolution*, which the family physician may discover if he looks for it; and this is the time when the impending calamity may be averted, by counsel-

*Some men are naturally superstitious and fearful of evil happenings. Some fear to travel on steamboats; some on cars or to ascend heights, and some by reason of past experiences have special cause for certain fears. But the fear of the neurasthenic is causeless and unnatural to him and preceded by an unaccustomed irresolution and timidity.

ling the patient to promptly suspend business, and seek relief and recuperation in restorative medicine, and rest from mental strain through temporary change and recreation.

Insanity is closely allied to neurasthenia, and is its frequent sequence as Van Deusen wrote. The morbid fears of the neurasthenic are but the shadows of graver coming mental events cast before. Often the advanced lunatic has no more of delusion than the trepidation and fear in their various forms, somewhat aggravated, of the neurasthenic. As neurasthenic frequently advances to insanity, so positive and well-defined insanity sometimes recedes to simple neurasthenia.

Esquirol has thus painted some of the advanced neurasthenic denizens of Salpêtrière and Charenton—"Certain persons who suffer from *panophobia* are afraid at the approach of night and darkness." (*Mal. Ment.*, p. 216). "Lypemaniacs dread obscurity, solitude, insomnia, the terrors of sleep; fear, terror, jealousy and hallucinations keep them awake." "I once had in charge," said he, "a lady whom the slightest noise filled with terror, especially during the obscurity of the night. The steps of a person walking lightly caused her to shudder, and the wind caused her to tremble. The noise which she herself made while in bed frightened her, and obliged her to utter cries of terror. I enabled this *panophobist* to sleep at night by keeping a light in her chamber, and placing a woman with her who watched during the whole night." (*Ib.*, p. 116).

How like a phase of neurasthenia is this, and what is mania, often, but intensified, aggravated, cerebral neurasthenia—exhaustion of the brain either from sanguineous impoverishment or blood pressure? True neurasthenia is *neurotrophæsthenia*, from failure, from whatever cause on the part of the involved nerve centres to appropriate the requisite nutrition for that normal repair of tissue which is essential to the maintenance of healthy tone and function; and like the unstrung lyre, responding "out of tune and harsh" to the player.

We could readily conjecture what might be the physisic symptoms. They are the symptoms of inadequate nerve nutrition, and in the higher centres of cerebrum, there are instability, irresolution, timidity, dread and fear, morbid and groundless suspicions, hallucination and delusion, not natural to the individual in his best state, positive hallucinations and delusions, appearing generally when greater than mere neurastrophic changes are affected in the cerebrum, and debility has passed into insanity and more or less organic change.

This note would be anything but brief were we to attempt to name all the psychic signs of general functional neurasthenia. No terms have yet been given to that inexplicable fear of one's own voice and other familiar sounds, once heard with pleasure by these nerve-weakened miseries; nor for the dread of certain dreams, of receiving once welcome visits from friends who have never offended, nor for the fear of riding in certain vehicles when no previous experience foundates the fear, and the numberless other nameless fears which unnaturally oppress these patients.

The *feature of functional neurasthenia, to be italicized, is the timidity not natural to the person* out of which these fears grow, and give to the mental character that notable change in which irresolution replaces former decision of character, and supplements even natural fearlessness with fearfulness and dreads innumerable.

Beard's view, that the characteristic neurasthenic fear is in the degree rather than in the kind, is only partly true. Their fears may be common to others, not neurasthenic; but they are not usual with the person afflicted with neurasthenia in his healthiest nerve condition. The mental change of character in general functional neurasthenia is none the less real though far less in degree than that which attends upon insanity. It is seen in the mental movements as it is shown in the voice and walk and in functional nerve and inertia. This change is psychical timidity and indecision of mind and manner, whether it displays itself in monophobia, deutophobia, tritophobia, panophobia, or whether it has not taken shape in a single definite fear, or in multiple fears defined.

Ergot in Obstetrics.—Dr. P. C. Williams, of Baltimore, has been led by experience to use ergot in moderate doses, to prevent abortion, at any time prior to the fourth month. He never gives ergot in the first stage of labor nor in the second stage until there is a dilatable os uteri and a dilatable vagina and vulva. Under these conditions, if the labor does not go on to speedy termination, he gives ergot and prepares the way for the use of chloroform and the forceps. He uses ergot, 1st. To shorten the labor and to guard against exhaustion; 2d. To guard against diminution of pains by the chloroform; 3d. To prevent post-partum hæmorrhage; 4th. To maintain uterine contractions after delivery as the best protection against septic absorption. Dr. Williams is fully convinced that, in obstetric practice, it is the duty of the physician to shorten labor and diminish pain as much as is

consistent with the safety of the mother and the child. In this spirit, he uses chloroform, forceps and ergot—chloroform to relieve the pain, ergot to prevent the chloroform retarding the pains, forceps to shorten the labor, and thus diminish the sufferings of the mother.

For the past seven years Dr. Williams has kept a record of one hundred and fifty-eight cases in which this course of treatment has been pursued. The result has been no deaths for the mother and three for the child—that is to say, one death for every fifty-two cases. He uses ergot hypodermically, which is the only mode in which he has found it efficient. In severe post-partum hæmorrhage, absorption from the stomach is so slow and difficult, if not impossible, that he thinks it useless to give it by the mouth; therefore he uses fluid extract of ergot hypodermically. It is more certain in its effects than ergotine and is not liable to produce abscess.—*Report of Dr. Thomas Opie, of Baltimore, before the Medical and Chirurgical Faculty of Maryland, April, 1882.*

Listerine.—Frank M. Deems, M. D., Ph. D., President Augusta (Ga.) Academy of Medicine; formerly Laboratory Instructor in the Medical Department of the University of New York; member of the New York Microscopical Society, has an important paper in *Medical Brief*, June, 1882. Listerine is a clear liquid, of an acid reaction, a powerful, fragrant, aromatic odor and pungent taste, both of which are rather pleasant and agreeable than otherwise. Its specific gravity is considerably lighter than that of water, with which, however, it is readily miscible in any proportion. Listerine is anti-zymotic, in the strict sense of the word, as derived from the Greek *anti*, against, and *zúmosis*, fermentation.

Without entering here into a discussion of the question as to whether or not fermentation of every sort is due to the action, and formed under the influence of living organisms upon the material undergoing change, “it will be admitted on all sides” (Prof. H. C. Wood) “first, that these living entities are the invariable accompaniments, under ordinary circumstances, of fermentative processes; second, that substances which poison or kill these germs likewise avert these processes.” Anti-zymotics, therefore, are substances used for the purpose of preventing decomposition; but their most important use is to kill disease-germs—to destroy the activity of the living particles which constitute contagion. In this sense, I believe listerine is, from numerous, varied, and re-

peated tests, a powerful and trustworthy antiseptic agent. It prevents the various fermentations.

Meat keeps indefinitely in listerine. It is a swift and sure destroyer of infusorial life. It destroys the activity, growth, and motion of low forms of vegetable life. Owing to this property, combined with its non-toxic effect on the human system, in quantities medicinal and not excessive, it has the great advantage over carbolic acid in that it may be administered *internally* as well as used with freedom either by injection, lotion, or spray, in the natural cavities of the body, such as the ears, nose, mouth, throat, larynx, trachea, bronchial tubes, rectum, vagina, urethra and bladder. Even in full strength, listerine does not coagulate the albumen of the flesh. I believe that owing to its germ-destroying power and non-poisonous action, it is peculiarly adapted to the treatment of diseases affecting these parts, especially to those calling for an antiseptic remedy. Inasmuch as there is a great difference between the environment of germs in ordinary fermentations outside of the body and those in the organism, it is evident that doses and *dilutions* of antiseptics generally and of listerine in particular, harmless to the former may have very great effect against the latter; because in the artificially-prepared fluids of the laboratory the micro-organisms only find comparatively inert matter, whereas in the organism, they have to contend against the vitality of the globules, "which are, in themselves, a sort of living beings." I have endeavored, as far as possible, to indicate the dilutions required in practice, but this point can best be settled by experience. Keeping the above statement in view, however, I believe the experiments warrant somewhat greater dilutions than those recorded in the experiments and conclusions. Pending my investigations of its power over ferments, I have used it in my daily practice, and, so far, my clinical experience has confirmed my expectations of its efficacy. It is an agreeable and perfect tooth and mouth-wash. I have used it with success in purulent conjunctivitis (diluted one-third), and two cases of leucorrhœa yielded promptly to its use. I shall look for excellent results from its administration during the summer in the various diarrrhœal diseases of that season, especially in those affecting children.

*Conclusions**.—Listerine, up to a dilution of ten per cent.,

*We have carefully examined the tables reporting the conditions of Dr. Deems' experiments, and they fully justify these conclusions. We regret that we have not space for the tables, which are very complete and elaborate.—EDS.
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prevents putrefaction and preserves animal tissues. This solution being "sterilized" is analogous to the conditions of a freshly-made wound, and indicates the safety of listerine when employed to prevent the introduction and growth of germs.

Animal tissues are preserved in it (full strength), and no putrefaction can occur in tissues immersed in it.

A twenty-five per cent. solution of it prevents the development of bacteria and fungi in urine, and a five per cent. solution retards the usual changes which this excretion undergoes. This seems to recommend, for cystitis and other vesical diseases, a dilution of from one to four to one to ten parts as an injection into the bladder.

Fresh milk mixed with it, in the proportion of one of the latter to ten of the former, will keep wholesome for a week during warm weather. One to twenty will retard the changes sufficiently to make it a desirable article in the sick room. This indicates an important use in typhoid fever, and in intestinal troubles generally, especially those of artificially reared infants.

A thirty-three and a third per cent. solution of it prevents the development of bacteria, and consequently the decomposition of a vegetable infusion.

A fifty per cent solution of it arrests the development of bacteria in a vegetable infusion.

Miscellaneous Experiments.—1. A thirty-three and a third per cent. solution of listerine arrests, for a few days, and retards permanently, alcoholic fermentation in mixtures prone to and under suitable conditions for that process.

2. A six per cent. solution of listerine retards the ciliary motion of vorticellæ, and all ciliated infusoria, and a strong solution is swift destruction to all the lower forms of animal life found in liquids. It will prove a useful reagent to the microscopist in his biological studies.

3. A strong solution of listerine arrests promptly the motion of such algæ as diatoms, oscillatoriæ, etc., and also the motion of the spores of algæ during the process of "spore-swarming."

Fluid Extract of Jaborandi for Typhoid Fever.—Dr. A. L. Foreman, of Milton, Ill., in the June No., 1882, of the *Medical Brief*, states that he believes the fluid extract of jaborandi will abort an attack of typhoid fever. For the past six months, his community has suffered from an epidemic of this fearful disease—many cases proving fatal. The average

duration of the cases has been over thirty days. Last December he lost his first case on account of intestinal hæmorrhage. Since then, he has succeeded in every instance to which he has been summoned in time—some ten or more—in cutting short the disease by the use of fluid extract of jaborandi. He uses this medicine in half-drachm doses, given in a little hot water, every half hour, until four doses are taken. In the meantime, allow a little hot coffee to prevent sick stomach. Allow no cold drink. This treatment brings about a copious diaphoresis. In from four to six hours, he begins to give from two to four grains of quinia sulphate every three or four hours, and then he uses fluid extract of jaborandi mid-hour between the administration of quinine. With the jaborandi, he gives fluid extract of aconite and water, as in the following prescription :

Ry. Fluid extract jaborandi.....ʒj
 Fluid extract aconite.....gtt. x
 Water.....q. s. ʒiv

M. S. : A teaspoonful [as above stated—every four hours—between the doses of quinia.]

All solid food should be prohibited; but let the patient take four ounces of warm, fresh milk every three hours. Under this treatment, if the cases are seen in the first days of the attack, he has been able to discharge them as cured in from three to seven days.

[The editor of the *Medical Monthly* has several times used this plan of treatment, having begun it some three or more years ago, and has had encouraging results. But in some cases in which he has used this agent against supposed attacks of typhoid fever, he has doubted the correctness of his diagnosis, and solely because the cases have got well so readily. In one case of typhoid fever in which jaborandi was *not* used, his patient died. It may be skepticism that leads us to doubt our diagnosis in the several cases of beginning typhoid fever, that have recovered so rapidly; but with the single exception of the fatal case referred to of true typhoid fever, in which a competent consultant was in attendance and confirmed the diagnosis, we have not had a death from this disease since we began the use of jaborandi. Such a fact is suggestive. We do not undertake to assert, so positively as Dr. Foreman, a special confidence in the value of jaborandi. Still our experience has been sufficiently encouraging to lead us to use the medicine in cases of *continued fever*, of which there was no other *practicable* diagnosis, provided they are seen in their commencement. Like most

general practitioners, we have kept no notes of our ordinary run of cases.

We frequently regret not having done so; and this common regret of many physicians in large practice should serve as an advice to those who are entering upon the duties of the profession, to adopt some method by which they can preserve notes of *every* case they attend.

But returning to the matter of using *jaborandi* in typhoid or *continued* fever, during the first week of its invasion, we would recommend its further trial. If the results are favorable or otherwise, we would be glad to have exact reports from any of our readers. Our best way of arriving at satisfactory conclusions in regard to the management of diseases is to record our facts, and request their criticism—whether favorable or denunciatory. Let *truth* prevail.]

Book Notices, &c.

Medical and Surgical Reports of the City Hospital of the City of Boston. Third Series. Edited by Drs. DAVID W. CHEEVER, OLIVER F. WADSWORTH and A. L. MASON. DR. GEO. H. M. ROWE, *Resident Physician and Superintendent.* 8vo. Pp. 390. Paper. (By mail,)

These most practical and valuable "Reports" consist of fifteen papers, which our space does not permit us even to name except in general, as follows: Pathological Histology of the Spinal Cord, by Dr. Samuel G. Webber; Notes of 1036 Cases of Typhoid Fever, by C. Ellery Steadman; Synopsis of 50 Medico-Legal Autopsies, by Dr. Frank W. Draper; Surgical Cases, by Dr. David N. Cheever; Synopsis of 5 Years' Hospital Experience in Gynæcology, by Dr. Geo. H. Lyman; High Pressure Education, by Dr. Robert T. Edes; Cases of Diphtheria, by Dr. J. Hall Curtis; Optico-Ciliary Neurotomy, by Dr. Oliver F. Wadsworth; Two Cases of Uterine Fibroids, by Dr. Orlando W. Doe; Surgical Abstracts, by Dr. Geo. W. Gay; Analysis of 200 Cases of Primary Pleurisy, by Dr. A. L. Mason; New Surgical Apparatus, by Dr. Wm. P. Bolles; Diagnosis and Treatment of Deep Syphilitic Ulcerations of the Throat, by Dr. Edward Wigglesworth; Cases with Autopsies, by Dr. Eldridge G. Cutter; and Statistics of Amputations, by Dr. Herbert L. Burrell. Each one of these papers is an *excellent* article; and from time to time we will avail ourselves of the pages

of these "Reports" for the purpose of making selections—especially since a limited number only of the "Reports" are published, and their distribution is over a more limited range of territory than the circulation of the *Medical Monthly*. We make some notes in this issue of the treatment of typhoid fever, which will prove instructive to some and confirmatory of the experience of other practitioners. There are 36 doctors connected with the Hospital in their professional characters. The volume is sadly in need of an index.

Experimental Method in Medical Science. By JOHN C. DALTON, M. D. New York: G. P. Putnam's Sons. 1882. 12mo. Pp. 108. Price \$1.25. (For sale by West, Johnston & Co., Richmond, Va.).

The title of this book represents the subject of the second course of the "Cartwright Lectures of the Alumni Association, College of Physicians and Surgeons, New York," delivered January 24, January 31 and February 7, 1882, in New York. The Association did well in selecting the eminent physiologist and author they did for this course. Prof. Dalton considered his subject under the following headings of three lectures:—First, "Galvani and Galvanism in the Study of the Nervous System;" second, "Buffon and Bonnet in the 18th Century;" and lastly, "Nervous Degenerations and the Theory of Sir Charles Bell." Incidentally, very interesting biographical sketches are given of each of these great physiologists. We wish Dr. Dalton had followed the history of physiological research, through the great discoveries of Campbell up to the present time.

Strangulated Veins of the Uterus, and Other Papers—Gynecological and Surgical. By THOMAS H. BUCKLER, M. D., of Baltimore. Cambridge: Riverside Press. 1881. 12mo. Pp. 72. (By mail from Publishers.)

The author here gives, as reprints from various numbers of the *Boston Medical and Surgical Journal*, the following titled articles, in addition to the one above named: "Post-Parturient Pathology, Resulting from Imperfect Uterine Contraction after Childbirth, and on Involution—Complete and Incomplete;" "Inaptness of the Peritoneum to Inflammation, and the Importance, for Medical, Surgical and Diagnostic Purposes, of having Free Access to the Abdominal Cavity;" "Surgical Treatment of the Ovarian Pedicle." It was evidently the leading purpose of the author to collect his various papers in pamphlet form for personal gratification rather

than for any purpose of obtaining a remunerative sale of it. It should be a source of pleasure to Dr. Buckler to know that his papers have had a wide reading, and that many of his suggestions have been adopted in practice.

Compend of Chemistry. By HENRY LEFFMANN, M. D., Lecturer on Toxicology at Jefferson Medical College, Philadelphia, etc. Philadelphia: C. C. Roberts & Co. 1881. 16mo. Pp. 160. (By mail from Publishers.) Price \$1.

The true character of this book is made known by its title. It includes almost a reprint of the first edition of the "First Step in Chemical Principles." The work is not apt to be wanted as a text-book by any Professor of Chemistry in any medical college of the land; it will scarcely be in demand by medical students; professional chemists will not want it, as they must have better reference books on their shelves, to which they can refer for consultation purposes; and medical practitioners will rarely need such a work as the one on our table, as there are many that give more informaton. Perhaps this is a good "compend;" but it is not the work we would recommend to practitioners of medicine to purchase for their own instruction. We need not undertake to notice the book in detail.

Chemical Analysis of the Urine (based in part on Casselmann's *Analyse des Harris*). By EDGAR F. SMITH, Ph. D., Asa Packer Professor of Chemistry in Muhlenberg College, and JOHN MARSHALL, M. D., Demonstrator of Chemistry, Medical Department University of Pennsylvania. With Illustrations. Philadelphia: Presley Blakiston. 1881. 16mo. Pp. 104. Price, \$1. (For sale by Messrs. Woodhouse & Parham, Richmond.)

This is a practical and reliable guide for the educated physician, and will be an excellent laboratory text-book for the students of urinology—so far as relate to the chemistry and microscopy of healthy urine, or the urine of diseased conditions. There is this misfortune, however, about the book so far as concerns the ordinary run of practitioners; and that is this: It is a little too technical, and in some places requires one not fully familiar with the new nomenclature and chemical signs to think a little too long before he can exactly work out the meaning of the text. Besides this, most physicians, soon after entering fully into practice, forget their previous knowledge of the details of chemistry, and would therefore prefer that every point of detail would

be fully and plainly expressed—just as our housewives depend upon the exact receipt before them for making muffins, or cheese-cake, or mince pie, etc. The work is nicely issued and is handsomely illustrated, and will prove exceedingly valuable to those acquainted with the science of chemistry of to-day.

Manual of Obstetrics. By A. F. A. KING, M. D., Professor of Obstetrics and Diseases of Women and Children in Medical Department of Columbian University, Washington, D. C., and in University of Vermont, etc. With 58 Illustrations. Philadelphia: Henry C. Lea's Son & Co. 1882. 12mo. Pp. 328. (For sale by West, Johnston & Co., Richmond.)

The author does not attempt to make an exhaustive treatise, but simply a "*manual* of obstetrics," intended chiefly for the student and for ready reference on the part of practitioners. It is, in great part, a compilation from such authorities as Leischman, Playfair, Lusk, and other similar standard and exhaustive works. It will be found a useful book for hasty reference or for condensed statements of facts and descriptions that may be "long drawn out." A special and a very important chapter of some twenty pages is added "on the jurisprudence of midwifery." This will prove very serviceable in many cases when hastily called upon for an opinion or to guide one in making his examinations. A copious index is appended. It is a good book.

Students' Mannual of Venereal Diseases. By BERKELEY HILL, M. D., Professor of Clinical Surgery in University College, etc., London, and ARTHUR COOPER, M. D., Late House Surgeon to the Lock Hospital Second Edition. New York: Wm. Wood & Co. 1881. 8vo. Pp. 62. Paper. (For sale by Messrs. West, Johnston & Co., Richmond.)

This pamphlet is composed almost solely of the summaries at the head of each chapter in Berkeley Hill's work on "Syphilis and Local Contagious Disorders." It is a very serviceable "brief," as is shown by the exhaustion of the first English edition within a year, and the requirement for a second, from which latter edition this American publication is made. The price is only 10 cents.

Suppression of Urine—Clinical Descriptions and Analysis of Symptoms. By E. P. FOWLER, M. D. New York: Wm. Wood & Co. 1881. 8vo. Pp. 86. (For sale by Messrs. West, Johnston & Co., Richmond.)

This book is based upon ninety-three clinical cases, with

illustrations, tables and diagrams. The frontispiece consists of a chromo-lithographic plate of the left kidney and supra renal capsule—cystic degeneration. In his text references (on page 7) to illustrations, we do not find the illustrations printed with the proper letters so as to prove satisfactory. After a full report of his one case, which proved fatal, and upon which a thorough autopsy seems to have been performed, thirty-nine pages of tables follow, relating to anuria—its causes, etc. Then comes a reference to some rare cases or effects of the disease. Section 4 gives statistics respecting anuria and associated symptoms. Section 5 gives a *resume*. Section 6 contains the odds and ends relating to the subject. This valuable statistical paper was originally presented to the New York Medico-Chirurgical Society, December 14, 1880.

Lectures on Electricity (Dynamic and Franklinic) in its Relations to Medicine and Surgery. By A. D. ROCKWELL, A. M., M. D., Electro-Therapeutist to the New York State Woman's Hospital, etc. Second Edition. New York: Wm. Wood & Co. 1881. 8vo. Pp. 122. (For sale by Messrs. West, Johnston & Co., Richmond.)

The first edition of this invaluable and practical work was republished from a series of articles that were contributed to the pages of the *Virginia Medical Monthly* three or four years ago. The demand for the book was so great as to rapidly cause its exhaustion, which required a second edition. The opportunity allowed the author, in the preparation of this second edition, to bring it fully up to the standard of present knowledge on the subject. Many new paragraphs and wood-cuts have been introduced, and much has been rewritten so as to correct all errors. In its present form the book will prove of great value to every one who undertakes the use of electricity in medicine.

PAMPHLETS, REPRINTS, ETC., RECEIVED, for which we have no room for further notice; but most of which can be obtained by enclosing a letter stamp for each pamphlet to the respective authors named.

Diagnosis of Pott's Disease of the Spine before the Stage of Deformity. By V. P. GIBNEY, A. M., M. D., New York, N. Y. (Reprint from *Boston Medical and Surgical Journal*.) 1882. 12mo. Pp. 30. [An exceedingly valuable paper—full of cautions and suggestions of practical importance.]
Genital Renovation by Kopestenotomy and Kolpocetasis in Urinary and Faecal Fistules. By NATHAN BOZEMAN, M.

D., New York, N. Y. (Reprint from Vol. VI, *Gynæcological Transactions*.) 1882. 8vo. Pp. 43. [This eminent gynæcologist does himself injustice in trying to introduce too many words at the same time into medical nomenclature—as if he were a professional lexicographer instead of a practitioner of medicine—thus constantly calling off the attention of his reader from his subject to a study of his technical terms. He incidentally well defends his opinions as opposed to those of Simon. Barring the technicalities of his own introduction, the author's paper is an exceedingly important one to the profession.]

Electricity in Medicine and Surgery, with Cases to Illustrate. Same Author. 8vo. Pp. 32. Paper. Price, 25 cents. [Dr. Caldwell limits his practice to diseases of the nervous system, and as such has become perfectly familiar with the uses, modes of application, etc., of electricity. While he adds nothing specially new in regard to this therapeutic force, he yet very well illustrates its modes of application, and shows the benefits that are to be derived from its proper use by illustrative cases.]

Editorial.

Medical Aid Association.—This subject is one fully worthy of consideration by the Medical Society of Virginia during the Session to be held September 13th, 1882, at the Fauquier White Sulphur Springs, Va. There are, practically, about a thousand properly qualified *regular* physicians in the State, although the late census calls for more. The Medical Society of Virginia is becoming so numerically strong as to include in its fellowship nearly a half of these. Sooner or later—and that, too, in a very short while—this Society will possess a full working majority of the better class of the profession of the State. From its organization in 1870 to the present time, it has striven to benefit the State at large, and has made but little effort to benefit its own members in a financial sense. It succeeded in establishing a State Board of Health; but the Legislature of Virginia made the Board non-effective by allowing no funds by means of which the will of the Board could be carried out. Had this Board been vested with sufficient authority and means, the recent epidemic of small-pox, for instance, could easily have been checked in its beginning. An earnest and concerted effort was made by members of the Society during the recent ses-

sion of the Legislature to establish a Board of Medical Examiners for the purpose of furnishing to the State only such practitioners as were believed to be worthy; but it was impossible to get the bill fairly before the General Assembly. Such measures as these are not, in reality, to the interest of the purse of the qualified doctors of the Commonwealth. Epidemics that might be prevented by appropriate legislation, and the incompetence of ignorant or assuming doctors throw into the hands of the qualified practitioners more practice and more money than they would otherwise have. We do not refer here to the material pecuniary loss to the communities in which such epidemics prevail, or where the incompetent doctors reside. But it is plain that the loss of an active business man, or a wealthy investing one, or of an efficient laborer, in any community, deprives the State of so much. We may refer to this matter more fully hereafter. We will only add, in this connection, that neither of the two measures proposed looks to the pecuniary gain of the profession. They are both for the *public good*.

Believing these statements to be generally recognized, let us ask, What are we, as a State profession, doing for ourselves in a *material* sense? Ought not doctors provide for themselves in the event of sickness, and for their families, in the event of death, as well as the preacher, lawyer, merchant, clerk, railroad operative or laborer? We see springing up in almost every community so called "benevolent" orders or associations, which are appreciated by their members, and scatter good and valuable deeds among their associates when in need. We have heard of such organizations among lawyers and other parties related to the bar; preachers have such associations; the same may be said of railroad men, of merchants, ordinary mechanics, printers, cigar-makers, etc., etc. Benevolent societies of the class referred to would not be sustained as they are unless it were seen that they are a true benefit to those whom it is intended they should benefit. Are there not as many needy doctors as of any other class of people? How few comparatively make more than a livelihood while enjoying good health; and how few families of deceased practitioners are able to keep themselves together after the demise of the heads of their families? We have known of local medical societies that had to vote certain sums of money out of their treasuries to even afford decent burials to recognized members of the local profession; while the widows and the children had to descend into the straits of abject poverty, which the husband and father would

have been able to prevent had he lived and retained his health.

We do not propose to discuss the full merits of the subject at this sitting. But we maintain that some measure of the kind referred to, in connection with the medical profession of any State or community of States, would prove beneficial. Besides this, if such an organization should be perfected under the auspices of the Medical Society of Virginia, it would add to the membership and consequent influence of the Society. There are many outside of the Society now who are prevented from joining it because they cannot attend the meetings for want of means; and because they are not members of this body they take no active interest in promoting its cause. This measure should not make it obligatory on all members of the Medical Society of Virginia to join the proposed Aid Association; but let it be the *privilege* of any of the *Fellows* in active practice or in active affiliation as members of the Society, be entitled to membership in the Aid Association. Such member of the Aid Association should be compelled to abide the rulings of the Medical Society of Virginia as to his professional conduct. Thus no one could become a member of the Aid Association who was not a Fellow of the State Medical Society. We repeat, we believe there are many excellent doctors in Virginia who would gladly join the Medical Society of the State, with its small *per capita* expense of two dollars annually, in order to obtain the benefits of the Aid Association. The Medical Society of Virginia, by organizing and developing a system of the character named, would probably become a nucleus for a grand National organization.

The details as to the officers, the expense of carrying on this organization, the rules and regulations, etc., we will not discuss just now. Our aim is simply to direct attention to the matter, so that it may be more seriously considered than it has hitherto been by the Medical Society of Virginia.

Medical Society of Virginia.—The thirteenth annual session of this Society will convene at Fauquier White Sulphur Springs, Va., September 13th, 1882. By the middle of this month, the usual official circular will be issued, giving full details as to arrangements, etc. It is a pleasure to record, in the meantime, that there is a commendable activity on the part of the Fellows generally throughout the State in behalf of the Society. The President, Dr. G. Wm. Semple, of Hampton, Va., has devoted untiring energy to the promotion

of its every interest. The good results of these efforts are plainly manifest by the number of applications for Fellowship which are coming in. At present, the Society has over four hundred members; generally speaking, it may be said that this membership represents the talent and professional influence of Virginia. But there are yet some doctors of ability and education that ought to join, and thus contribute to the advancement of the cause and profession of medicine. Beside the high motives alluded to, which ought to persuade many to become Fellows of the Society, there are some reasons why all regular and properly qualified physicians should become members. In many of the States of the Union, there are now boards of examiners or other officials who require evidences of qualification before the new comer can enter upon practice. Scarcely a month passes that the Secretary of the State Society is not requested to forward to some party who has removed from Virginia an official certificate as to qualification, with the statement from the applicant that such certificate would materially help in getting into practice. But how can such an official statement be returned, when the applicant is not even a member of the Society? The day is near at hand when a physician who is not a member at least of his own State Society, will scarcely receive professional recognition in other States.

Trusting to the indulgence of subscribers in other States, we will briefly state the manner in which applications should be forwarded to the Secretary of the Medical Society of Virginia before the session convenes at Fauquier White Sulphur Springs, or else the form in which they should be forwarded to the Society during the session. Every applicant should state in a plain hand-writing, his name in full, post-office and county of present residence, date and name of the Medical College at which he graduated, and the name of a Fellow of the Society who recommends the applicant for Fellowship. Each application for Fellowship should be accompanied by the initiation fee (addressed to the Treasurer—Dr. Landon B. Edwards, Richmond, Va.). If the application is rejected, the two dollars so sent are returned to the proper party. If the applicant is elected (which is generally the case when he is well recommended), he at once shares all the benefits and privileges growing out of his Fellowship in the Society. We trust that many of our Virginia readers will *at once* send in their applications in accordance with the above form, and that they will attend the session to begin on 13th of September, 1882. The Fauquier County Society is

now actively at work making all necessary arrangements for the success of the Society's meeting.

Prize of Ex-Presidents of Medical Society of Virginia.—"To add to the interest of the meetings of the Medical Society of Virginia, and to the value of its *Transactions*, and to stimulate members to prepare and present important papers, the Ex-Presidents have decided to offer annually a prize for the best essay on some selected Medical Subject, and a prize for the best essay on some selected Surgical Subject. Each prize this year will be a gold medal, of \$50 in value, or its equivalent in money. Prizes are open for competition to all members of the Society. The Subject for the *Medical Essay* this year will be: "*Alcohol, its use and effects as a beverage and medicine.*" The Subject for the *Surgical Essay* this year will be: "*Recent progress in abdominal surgery.*" Candidates for these prizes are required to notify the Recording Secretary at least two weeks before the meeting of the Society of their intention to present papers, and to inform him of the probable length of time required to read them.

"The Society will first determine, by ballot, whether any paper is worthy of a prize, and afterwards, by ballot, which one is entitled to it. The disposition of all papers presented for these prizes is to be determined by the Society."

[We call the attention of the Fellows to the above announcement. We believe that in addition to the interest, great practical good will result from this new feature introduced by the Ex-Presidents.]

Dr. Kinloch's Case of Chloroform Narcosis.—The *New York Times* publishes a case of chloroform narcosis which occurred in the practice of Prof. R. A. Kinloch, of Charleston, S. C., and the article, or portions of it, have been generally copied by the secular papers of the country. The original article and the copies, as usually is the case, have grossly misrepresented the facts, and thus, for a time, endangered the reputation of one of the most distinguished surgeons in the South.

At a meeting of the Medical Society of South Carolina, the following preamble and resolutions were unanimously adopted. It shows the feeling of the profession in this matter, and vindicates the reputation of a very clever gentleman and an excellent surgeon. It is a matter in which the whole profession is interested, as the accident of chloroform narcosis may happen to any physician or surgeon in the world:

"That they regard these newspaper publications as afford-

ing the most striking evidence of unfairness, untruthfulness and misrepresentation that it has ever fallen to their experience to consider, in connection with the report of medical matters, as given by the secular press. Your committee are fully in accord with the members of this Society generally, in their feelings of indignation at the injustice done, most particularly to Dr. R. A. Kinloch, Mrs. Reid's physician, and also to Drs. T. Grange Simons and A. P. Pelzer, all respectable and worthy members of the profession, by the erroneous, and what appears to be, studied and malignant statements, prejudicial to their personal and professional conduct.

"1st. That, in the opinion of this Society, the death of Mrs. Reid from chloroform was not caused by imprudence or carelessness in the use of the agent, but from the fatal properties of that drug, which at times will manifest themselves in persons of peculiar temperament or constitution.

"2d. That the misrepresentation of the circumstances of this unfortunate case seem to have been intentionally made, inasmuch as all the family and friends were fully informed of the circumstances of the death of Mrs. Reid, and the facts of the case could have been easily obtained and correctly reported.

"3d. That we extend to our colleague, Dr. R. A. Kinloch, the attending physician, and his assistants, our sincere sympathy, not only for the unfortunate death of the patient, but because of the unjust position in which they have been cruelly placed.

J. FORD PRIOLEAU, M. D.,

F. L. PARKER, M. D.,

MANNING SIMONS, M. D.,

Committee."

Pre-Indian Relics.—Mr. Mann S. Valentine, of this city, though the busy manufacturer of the well-known meat juice, finds time to devote to other and less practical work. Recently he sent, for exhibition, to the Anthropological Institute, London, a collection of "very curious articles," says the *Scientific American*, July 22, "fashioned in soap-stone and clay," which were lately found between the ranges of the Blue Ridge and Alleghany Mountains, near Mt. Pizgah, N. C. Some of these relics were evidently household utensils, and sculptured with metal instruments. "The human type is alike in the various objects, but is not Indian. * * * The inference hazarded is that the articles were made by an earlier and more civilized race, subjugated and partially destroyed by the Indians found in Virginia on the

arrival of white men." Mr. Valentine has an extensive and most valuable collection of Indian relics.

Another Bogus Medical College Proposed.—The *Medical Times*, of July 15, brings to light the fact that there is a proposition on foot to establish another institution for the sale of medical diplomas. The *Times* well says, "Legislation has not done enough. The editorial war must still go on until it is recognized that medical colleges should be educational institutions merely—not peddlers of the right to vex, worry, and destroy." The *Times* states that the following letter was recently received by the publishers of the *Medical Gazette*. It will be seen that "J. C. Petit, M. D., *Dean*," is anxious for a *price list*. But read the letter:

"COLLEGE OF PHYSICIANS AND SURGEONS,
"JOLPIN, Mo., 5, 28, 1882.

"GENTS,—Please send *price list* of *Doctors*, and *Druggist Names*. by states as I want to mail *several thousand Annual Catalogues* to the *Profession*, all over the U. S. A. and Canada. I am starting an embryotic Pioneer Medical College and I must, of necessity, nois it around to the world to make it pay me. An early reply will greatly oblige your Respectfully, &c.

J. C. PETIT, M. D., DEAN."

Reports of Society Sections.—While examining the "Report of the Section on Obstetrics and Gynæcology of the Medical and Chirurgical Faculty of Maryland," 1882, prepared by Prof. Thomas Opie, M. D., of Baltimore, Chairman of the Section, we were impressed that the suggestion he seems to have originated was a useful one. We abbreviate the first sentences of this excellent report from which we make an extract on "ergot in obstetrics." The "Section on Obstetrics and Gynæcology met and organized." Contributions were "solicited from such members of this and the various local societies."

The good results of this plan are manifest by the nature of the "report" now before us. With a modesty that generally becomes one of ability and of true merit, under such circumstances as that of being the chairman of the Committee, Dr. Opie contributes his report of six cases of septicæmia after all the other reports have been recorded; and then he notes "two cases of ante mortem heart clots." Prof. M. L. James M. D. of this city, several years ago wrote a paper on this subject which ought to have been recognized by our present author; but we presume the amount of reading that

Prof. Opie had to do, in the preparation of his paper, caused him to overlook the important contribution of Prof. James, to which we have referred.

But we proposed simply to remark upon Prof. Opie's excellent plan for obtaining useful reports, so far as concerns the "Section," of which he was chairman. Almost every State Society has "Sections" in several departments of Medicine. It is true, all of the State Societies are not as local as the Maryland Society. But the same principle holds good that we wish to apply to all of the State Societies with which we are acquainted. It is a compliment, of which any should feel proud, to receive the appointment of the "Reporter" or "Chairman of the Committee" to report on advances in medicine or surgery. Simply, if postal cards were sent out once a month or two, by the Committee, requesting reports in its special department, much information might be gathered.

There are many town and country doctors, as well as some city practitioners, who have valuable suggestions and important cases that ought to be recorded; but they make no public note of them simply because of an unfortunate diffidence. If these cases or suggestions were properly stated—even in letter form so as to be utilized—to the proper authority, how much of value might be saved to the profession which is now lost? There are few—*very few*—whose experience extend over five or ten years, and many much younger in practice who cannot throw out some suggestion from his failure, or some advice which he acquires from his success that might prove of service to others.

The suggestion we have thrown out, which we accord to Dr. Opie, is one worth remembering. In his report, we find a case noted by Dr. Thomas A. Ashby, of Baltimore, of "extra uterine pregnancy, presenting unusual and difficult points in diagnosis;" a paper by Dr. B. B. Browne, on "the use of electricity in the treatment of amenorrhœa; another note of a paper referring to" combined intra uterine and abdominal twin pregnancy; Dr. A. F. Erich reports "a case of extra-uterine pregnancy, with ulceration through the abdominal wall." Dr. P. C. Williams, of Baltimore, makes some remarks on a case in which he uses ergot. This case we copy almost in full, in the department for "Analyses, Selections, etc."

Without enumerating other papers that are mentioned in the "report" by Dr. Opie, we wish to record ourselves as one of the approvers of his plan.

The Chinese.—The medical officer of the State Board of Health of California says a good word in behalf of the Chinese. *Good Health*, July, 1882, says that this officer in his report to Congress, states that he never knew any disease or pestilence originating or spreading in the Chinese quarters of the city. He attributes their healthy condition and immunity from disease to their frugal life and cleanliness. They are clean in their habits and drink no whiskey. They consequently obtain a better resisting power to the attack of diseases. The death-rate is greater among the whites than among the Chinese of San Francisco—there were fewer cases of small-pox among them than among the whites, the ratio of population being allowed. *Good Health* adds, substantially, the Chinese is a vegetarian nation, and has been such from time immemorial; he is well paid for his frugality by his freedom from dyspepsia. He does not paper the walls of his living rooms, and thereby avoids poisoning from arsenical wall-paper. Yet it must be stated, while taking no fancy to beefsteak, he likes the flavor of a fat cat in his soup.

Dr. Lewis Wheat has been recently appointed by Gov. Wm. E. Cameron to a position on the Board of Directors of the Medical College of Virginia to fill the vacancy occasioned by the death of Judge Meredith. Dr. Wheat is an active practitioner in this city, and there is a "push" about him which will no doubt result in good to the College.

The Texas Medical Society has an active membership of over 200 members. It held its Fourteenth Annual Session at Fort Worth, in April last. The interesting proceedings are reported in the *Texas Med. and Surg. Record* for July. The next session will be held at Tyler, Texas, in April, 1883. Dr. S. F. Starley was elected President for three years, and Dr. J. W. Burt, Secretary.

Dr. T. J. Turner, Secretary of the National Board of Health, in a recent circular, states that the Bulletin, hitherto issued, will likely be suspended by reason of want of sufficient appropriation by Congress. If such a result should occur, it would damage the people. This publication, while not quoted from, is the only source from which vital statistics of the country can be regularly gotten. It is wrong in Congress to lessen the means of information of a profession upon which the health and lives of the citizens so materially depend.

Dr. James B. McCaw, of this city, and Dean of the Medical College of Virginia, is enjoying a European trip. He will be absent for a couple of months or more. During his absence, Dr. M. L. James, Professor of Materia Medica, Therapeutics, etc., will act as Dean, to whom all letters relating to the College should be addressed until Dr. McCaw's return to the city.

The Medical Chronicle is the title of a new, neat and well edited medical monthly (judging from the initial number), just launched in Baltimore, as its Editor says, "freighted with hopes of a prosperous voyage." Dr. George H. Rohé is editor, and states "while primarily local in its interests, the *Chronicle* will endeavor never to deserve the charge of being provincial." We wish for the *Chronicle* and its Editor the greatest success. Each number will contain twenty-four pages. Price \$1 per annum.

Dr. T. Gaillard Thomas will resume his connection with the College of Physicians and Surgeons, New York, assuming the Chair of Gynæcology.

Minnesota State Medical Society.—Fifty-three members were added to the roll of this Society at its last meeting, making the present membership 250. The *Northwestern Lancet* of July 15th, is specially anxious for Minnesota to be well represented at the next meeting of the American Medical Association, which meets in Cleveland, Ohio, next year.

The Officers of the American Medical College Association for the ensuing year are: President, Dr. W. W. Seely, of Cincinnati; Vice-President, Dr. Deering J. Roberts, of Nashville; Secretary and Treasurer, Dr. Leartus Connor, of Detroit. The President will fix the date for the next meeting, which will be held in Nashville, Tenn.

Health Circulars to Mothers.—In the city of Brussels, whenever a birth is registered, the Registrar hands the parent, gratuitously, a little pamphlet of five pages, containing short and plain directions for the management of children. It is proposed to introduce a similar practice in Paris, where the mortality among children is so enormous.—*N. Y. Medical Record*. [It would be well for family physicians everywhere to have such an adjunct to place in the hands of the young mother.]

Dental Association.—The Fourteenth Annual Meeting of the Southern Dental Association will be held in the city of Baltimore, commencing Tuesday, 8th of August.—*So. Dental Journal*, July, 1882.

Dr. Charles H. Crane, late Assistant Surgeon-General U. S. A., succeeds Dr. Barnes, retired, as Surgeon-General. The promotion of Dr. Crane is everywhere approved.

Obituary Record.

Francis Joseph Mettauer, A. M., M. D., died April 28th, 1882, at his residence at Worsham, Prince Edward Co., Va., in the sixty-fourth year of his age. He was born in Norfolk, Va., May 24th, 1818. He was the oldest son of Jno. Peter Mettauer of national reputation, whose father, Pierce Mettauer, M. D., came to America with Count Rochambeau. He entered Hampden Sidney College Va., in 1835, but went to William and Mary College in 1836 and graduated there in 1837. In October 1841 he went to New York and entered the University of the City of New York. In June 1843 he received the degrees of A. M. and M. D. The Medical Department of Randolph Macon College was located at Prince Edward Court House during the following December, with Jno. P. Mettauer, A. M., M. D., LL. D., Professor of Principles and Practice of Surgery, Medicine and Mid-wifery, and Francis J. Mettauer A. M., M. D., Professor of Anatomy, Physiology and Chemistry. Soon after this, in 1844 or 1845, he was elected Professor of Chemistry at Hampden Sidney College and at the Female Seminary at Prince Edward Court-House. He was elected Professor of Chemistry at Randolph Macon College in 1852, but declined the position. In 1854 he was elected Professor of Chemistry in the University of Mississippi but declined that position also. Besides the positions, in the three institutions mentioned, sufficiently onerous in themselves, Dr. Mettauer did a very extensive practice, and had a large reputation. During the last 25 years of his life, however, he was greatly incapacitated by hernia for the physical exercise that a country practice demands. Dr. Mettauer was not only talented, but he was a genius. No subject could be broached in which he did not show evidence of great reading, and in most cases of careful study.

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Original Communications.

ART. I.—**The Importance of Careful Examination of the Ears in Effecting Life Insurance.*** By LAURENCE TURNBULL, M. D., Aural Surgical to the Jefferson Medical College Hospital, Philadelphia, Pa.

In but few of the life insurance companies of this country is the subject of ear disease given that attention which its importance demands. Every disease of the brain, chest, abdomen, etc., is carefully noted, and searching questions are expected to be answered, and all the other parts are scrupulously and conscientiously examined, but the important organ, the ear, with its diseases, is entirely ignored.

Some of the questions, it is true, even now, which are desired to be answered by applicants for insurance in life insurance companies, give to them, as well as to the medical examiner, the opportunity of mentioning or ascertaining if disease of the ear existed or exists; but it is to the indefinite-

* This article was prepared for presentation to the American Medical Association; but owing to an error of address, it did not reach the session. The author has very generously contributed the paper to this journal; and its importance to every medical examiner for a life insurance company or beneficial order will be appreciated as soon as it is read.—ED.

ness of the question, to which I refer more particularly, viz.: "Do you know of any other circumstance, not comprehended in the above questions, that may render the acceptance of your proposal for insurance more than usually hazardous?" that makes it of little utility. It leaves a ready loop-hole for deceit, on the one hand, and laxness on the other. Unfortunately, owing to the old—now obsolete—opinion, held by medical men, that an ear, discharging blood, serum, or pus was not to be cured, and was in itself salutary, impressed the laity with the opinion that such a discharge was not dangerous and need not be considered or even mentioned as increasing the risk of the life of the individual. Thanks to the careful study and increased knowledge of the ear and its diseases, the subject of the risk of diseases of the ear in life insurance is receiving, on the continent and in Great Britain, a fuller share of attention.

We shall endeavor to state our reasons why persons who are deaf or who are suffering from acute or chronic ear disease, are not free from danger to life. *First*, the disease may pass at any moment into the brain, being propagated from the middle ear or tympanum along the Fallopian canal, by the aid of the facial portion of the seventh pair of nerves. "The venæ auditivæ internæ, which also run through the meatus internus, empty into the sinuses of the dura mater, and therefore venous hyperæmia must occur in the labyrinth whenever a decided passive congestion takes place in the blood current of the brain or its membranes." *Von Troeltsch Diseases of the Ear in Children*, p. 142, Translation. *Second*, by communication of caries of the mastoid portion of the temporal bone to the meninges of the brain, from which it is only separated by a fibrous covering. *Third*, owing to the numerous railroad crossings in this and all the large cities in the Union, it has been found that a very large number of accidental deaths take place at these points, averaging almost one each day, as in our own city. No one can avoid these crossings; and therefore deaf persons, with all their cautiousness, which, owing to their infirmity is highly developed, are more liable to accidents. This is the case even if but

one ear is affected, as the individual cannot tell the direction from whence the danger approaches so as to avoid it.

The fact alone of a person being deaf to the voice spoken in an ordinary tone in one or both ears should prevent his acceptance as a first-class life risk. Again, if the individual is suffering from a discharge from the ear, which, in the great mass of cases, is also attended with a perforation or hole in the membrane, which separates the external from the middle ear, his acceptance as a risk at all (for it may be accompanied with disease of the bone) should depend upon the cure of the discharge and the healing of the perforation. There are very few cases where a person may have a discharge of a watery character from the ear, the result of an eczema or skin affection, or from furunculous abscesses in the ear, or fungi, in which there is no perforation of the drum membrane. In this class of cases the disease may be cured with safety and success; such a case of disease of the ear would not be considered dangerous to life or materially affect the issuing of a life insurance policy, if the patient was found in good health, with an unimpeachable family history, and of regular habits.

Illustrative cases.—Every one is familiar with the constantly occurring cases of death of persons who are so deaf as to be unable to hear the sound of the coming train, and have been caught upon the railroad and crushed to death by a train approaching in the opposite direction from the one expected, or in driving and not hearing the sound of the warning bell.

The second class of cases includes those who, on examination, suffer from chronic discharge from the ear, which discharge may be moderate in quantity, and not accompanied with much pain, and yet it may have existed for months, and sometimes years; but at any moment the disease may become acute from the following causes:—Pharyngitis and rhino-pharyngitis, coryza, bathing, allowing cold water to penetrate the ears; also bronchitis and pneumonia, eczema, mumps, varioloid, small-pox, etc. The larger proportion are consequences of cold, to which all persons are exposed, causing either disease of the ear or the lighting up of a chronic affection. When cases of the class already referred

to terminate fatally, it is usually by meningitis or inflammation of the brain, and it is almost always rapid, although there are cases which live along for months with the brain in a disorganized condition, and ready, like the dry wood, to kindle at the slightest spark; as illustrated by the following cases :

Thos. A., aged twenty-five, has had an otorrhœa since childhood. No pain; the only inconvenience he suffered was the care it required to cleanse the ears every morning. He removed from New England to Pennsylvania during the summer, and was apparently strong and well. During the following March he took cold, and this was followed by a slight attack of pneumonia. When convalescent, his ear began to pain him, which was followed by delirium—the discharge almost ceasing—and in the course of two weeks he died of basilar meningitis, in spite of every effort to save him.

On *post-mortem* examination, there was found extensive disease of the floor and roof of the middle ear, with a loose mass of dead bone, which involved the petrous portion of the temporal bone, and the inflammation had penetrated the coverings of the brain.

Let me report two other cases, showing how, without as much warning as the first, neglected otorrhœa proved fatal. Both patients were women, and had, previous to these fatal illnesses, enjoyed good health, with the exception of a discharge from the ear.

The first patient, aged forty years, became suddenly excited; violent headache set in; in two or three days, she became comatose, and never rallied. After death, the appearances were similar to those of fatal cases of cerebro-spinal arachnitis.

The second patient, aged thirty-five, had been attacked with severe pain in the head, sudden symptoms of general pyrexia followed, and shortly afterwards, complete paralysis of the portio dura of the affected side developed. In this instance death was clearly due to pyæmia, with pleuritis and general pulmonic congestion, which set in before death.

In the author's work on the *Ear and its Diseases*,* there will be found full details for the various methods of examination of the diseased ear, under the various headings, auditory canal, external, middle and internal ear, with refer-

ence to swelling of the lymphatics in the maxillary and mastoid fossa, fistulous openings with discharge of pus, etc., and the various diseased conditions of the bones, especially the temporal bone and mastoid process, which are so dangerous to life, as well also as carcinomatous degenerations of the auricle or pinna.

Tumors of various kinds and swellings are found upon the auricle and in the lymphatics of the mastoid region. These are often evidences of a deep-seated constitutional diseased condition of the general system, of a syphilitic, scrofulous, gouty and tuberculous character; they are also an evidence of a diseased condition of the brain. These tumors are foreign bodies, like polypi, etc., extend into, and are found filling up the auditory canal, to the total destruction of the bone, etc. In some rare cases, when carefully examined with the microscope, they appear as carcinomatous neoplasms.

When these polypoid growths are found on, or inside of the membrana tympani, with more or less discharge of pus (otorrhœa), they are apt to be followed by dangerous inflammatory symptoms, and even sudden death, the causes of which we have before alluded to.

The appearances of the membrana tympani must receive careful attention, opacities and the curvature of the membrana, with the condition of the umbo or bright light spots, etc., are evidences of the condition of the middle ear.

Perforations of the drum membrane (membrana tympani), large or small, after the age of forty years are always matters of serious consideration, as after that age they rarely heal, and therefore the promontory is exposed, and the brain, which lies close to it. In young persons, these perforations are not so dangerous if they do not involve more than one-half of the membrana and if they are not in tuberculous patients.

Besides the auditory canal, membrana tympani, the physician must direct his attention to the naso-pharyngeal region, as this portion of the system has an important influence in diseased conditions of the middle ear, and cannot be cured without the latter having been properly treated.

The last portion we shall have to consider will be the *internal ear*; and although life is not apt to be lost from dis-

ease of a primary character of the labyrinth, still severe injury or inflammation of this portion of the ear will unfit the individual from obtaining a livelihood at his usual occupation, or will make him an invalid for life. (See cases reported in the author's work, already referred to.) If the person is affected with constant pulsating tinnitus aurium or great dizziness, as the result of an organic change in the auditory nerve, semi-circular canals, cerebellum or spine, it will be readily understood how important this condition of things would be in affecting a life insurance. Two instances of this character are now under our care—one in a man of forty-five, who, to look at him, is the very picture of robust health; he is six feet high, stout, broad shouldered, with a fine color, but, owing to his dizziness, he cannot make for himself a comfortable living. Another is a much younger man, who has recovered from a former attack of Meniere's disease, but cannot work at his trade, owing to the distressing symptoms about his head and ears; and yet he gives no evidence to the eye that he is a confirmed invalid.

The subject of dizziness or vertigo is one of especial interest, and is usually the result of an irritation of the inferior cervical ganglion, and due, in most cases, to disordered circulation in the labyrinth through vaso-motor nerves of the vertebral artery. Still there are many instances where, from simple pressure of a foreign body, all the distressing symptoms of the most painful character are brought about and are often not relieved by the physician, because he neglected the ear, or, as the following cases will illustrate, as also others which have before been reported, of cerebral and epileptic symptoms, the result of disturbances of nervous action.

Dr. Katz (*La Presse Med. Belg.*, quoted by the *Medical and Surgical Reporter*), reports the case of a woman, thirty years of age, who, without any history of nervous disease, had, for a year, been troubled with tinnitus aurium and epileptiform attacks, at intervals of from one to two months. All the means employed to shorten the attacks had been fruitless. At the Doctor's first examination, he found at the bottom of the left meatus a roll of cotton covered with cerumen. This being removed, the woman was relieved of her tinnitus and epilepsy.

Dr. Wm. A. Hammond (*Hospital Gazette*, New York) reports three cases illustrating the degree of cerebral disturbance which may be caused by impacted cerumen.

Case I, aged 27, was, when first seen, suffering from vertigo, pain in the posterior portion of the head, insomnia, melancholy and hallucinations of hearing; the latter were very marked, and scarcely ever absent during waking hours. The whisperings which she seemed to hear were of the following report: "You have lost your soul. You have committed the unpardonable sin. You are too vile to live. Go and kill yourself," etc. Frequently there was a repetition of one of these or of other sentences of similar import for hours. She had begun to believe in the reality of the voices, although at first recognizing that they were only hallucinations.

She had been subject to treatment consisting of cupping, leeching, blistering, purging, etc., without relief. Upon examination, both meati were found to be obstructed by plugs of inspissated cerumen. These were softened by introducing a few drops of a solution of soda bicarbonate in glycerin, and the next day they were removed by injections, and the patient was kept quiet during the day. On the following morning there was entire freedom from dizziness, and the whispering voices seemed further away. Little by little the delusion decreased in reality, and after a few days there was complete recovery.

Case II, aged 22, was also suffering from vertigo, pain, deafness, etc. He wore an expression of great anxiety, walked with a staggering gait, and was greatly depressed. Both auditory canals were found plugged. The plugs were removed with warm water, and the symptoms almost immediately disappeared.

Case III, a lawyer, was suffering from vertigo, pain in the head, confusion of ideas, insomnia, and hallucinations of hearing. The voices troubled him to such an extent that he was unable to follow his profession. He did not actually believe in their reality, but confessed a gradually increasing inability to disbelieve. Both ears were found full of inspissated cerumen. This was thoroughly softened by soda in glycerin and easily removed with warm water. On the instant, the voices ceased and there was complete relief of the symptoms.

About two months afterwards, the man was fined and imprisoned for contempt of court. He had imagined that the

judge was calling him hard names, and had retorted. An examination was obtained, and the ears were found in the same condition as previously. The plugs were again removed, and did not reappear.

In conclusion, we would advise that the following questions be answered by the applicant for life insurance:

First, Are you suffering from any form of disease of the ears?

Second, Have you pain, noises, or dizziness, or any discharge from the ears?

Third, Are you at all deaf?

The following questions are to be answered by a competent physician, who must have made an examination of the patient's organs of hearing by the most approved method.

(a) What influence has the disease of the ears upon the life of the individual?

(b) Has the disease of the ears any tendency to influence any local or general affection of the system of the individual?

(c) Will the disease of the ears prevent the individual from following his ordinary occupation, or tend to prevent him from earning a livelihood?

1502 Walnut street.

ART. II.—**Duboisia versus Atropia for the Relief of Photophobia.** By JAMES L. MINOR, M. D., Assistant Surgeon to the New York Eye and Ear Infirmary, New York, N. Y.

Mrs. C., aet. 28, the subject of acquired syphilis in its tertiary stage, was under my treatment for diffuse keratitis of both eyes. The keratitis had been in existence for about six weeks, during which time no treatment had been received, and the iris had become secondarily, but mildly involved. Some pain in the eyes was complained of, but the most distressing symptom was photophobia of the severest type—with the weakest illumination that allowed an examination of the eye. It was necessary to use a retractor to separate the lids; and in a moderately darkened room, she kept the eyes closed and the shade pressed closely over them, to exclude the light.

She was at once placed upon the *mixed treatment*, for her constitutional disease, and, as general tonics, iron and the

tincture of bark were freely administered. For the eyes, a solution of atropia sulphate (gr. iv, ad. ʒj of water) was instilled three to six times daily, and warm applications were frequently applied. This line of treatment was persisted in for nearly two weeks with only slight amelioration of the subjective symptoms, though the eyes looked better and the general health had improved.

I then used a solution of duboisia sulphate (gr. ij, ad. ʒj of water) in the eyes—suspending the atropine. The first application was about 9 o'clock A. M. At noon the photophobia was markedly reduced, and the duboisia was repeated. Late in the afternoon the photophobia was entirely absent, and on the following morning, the patient being still under the influence of duboisia, she walked several blocks on the street with no other protection than that afforded with moderately shaded smoked-glasses. After two days of relief from photophobia, furnished by duboisia, I discontinued that agent. The photophobia returned on the following day, and was uninfluenced by atropia, but succumbed to two instillations of duboisia. I then stopped the duboisia and used atropia in its stead. The photophobia returned on the next day, to disappear under the use of duboisia. I was then perfectly convinced that duboisia was a specific, in this case at any rate, and continued its use to a satisfactory termination.

Two points of interest are presented by this case: *First*, The marked influence exerted by duboisia in the relief of photophobia which atropia failed to benefit. *Second*, The occurrence of interstitial keratitis in an adult with acquired syphilis, simulating exactly that form of keratitis so characteristic in young subjects of inherited syphilis.

ART. III.—Exploratory Puncture of a Vomica in the Lung, with View to its Cure by Injecting a Solution of Carbolic Acid.

By F. PEYRE PORCHER, M. D., Professor of Materia Medica and Therapeutics, and formerly Professor of Clinical Medicine in the Medical College of the State of South Carolina, etc., Charleston, S. C.

J. J., æt. 48, entered the wards in the City Hospital under our care, June 29, 1882, suffering from advanced phthisis pulmonalis, with a cavity in the left lung. The auscultatory signs gave evidence that the latter was of large size. It appeared to be seated quite superficially—with abundant mucous rales accompanied by crackling and gurgling, and with

no pericardial dullness to complicate the case; so that a very fair opportunity was offered us to follow the practice pursued by Pepper, Mosler, Freuger, Hollister and others. There was also much to encourage in the report of the case by Dr. Edward Bull, of Christiana (*Amer. Jour. Med. Sciences*, April, 1882, p. 559), where a gangrenous pulmonary cavity was incised, injected, drained and cured. The result may prove as interesting and useful to others as it has been to ourselves.

After a careful examination, we introduced the long medium sized needle of Dieulafoy's aspirator into the skin of the chest over what was presumed to be the centre of the cavity, namely, in the interspace between the second and third ribs, about two and one-half inches below the clavicle and two inches from the left border of the sternum—so as to avoid also the possibility of entering the pericardial sac. After the needle had fairly penetrated the skin and intestinal muscle (as in our previous operations for paracentesis of the pericardium), we requested our assistant, Dr. F. W. P. Butler to exhaust the air in the aspirator so that any fluid which was reached would certainly be drawn up and be seen in the glass window with which the tube is furnished. The needle being gradually forced farther and farther, we could only hope to know that it reached the cavity in the lung by the appearance of pus or mucus. Believing from the auscultatory signs that the cavity did contain such material, and as none appeared, we continued to push the instrument to the depth of three and one-half inches, when a measured ounce of serous fluid was drawn up, accompanied by much froth. This made it quite certain that we had passed entirely through the lung and had tapped the cavity of the pleura beneath it; therefore we refrained from injecting any of the solution of carbolic acid, and hence the operation, to this extent, proved a failure. The cavity must consequently have been comparatively dry, or its walls closely approximated, so as to give no indication when it was entered by the needle.

The presence of the large amount of air mingled with the fluid is accounted for by the fact that whilst the point of the needle was in the pleural cavity which it was emptying, the froth was formed by the intermingling of air which entered the tube of the needle through a fenestra in it about two-thirds of an inch from its point and upon a level with the vomica into which it opened. The fluid contained no pus or mucus, was unstained by blood, but coagulated when

subsequently boiled and before nitric acid was added—these and its appearance being conclusive as to its source. The patient had been so ill that we had never examined the posterior portion of the chest for the presence of fluid. No injurious effects whatever seemed to result from the operation, although death occurred five days after.

At the autopsy the lung was found much congested and engorged with serum; there were small disseminated tubercular nodules and a large cavity present—three by four inches in dimension—with no fluid in the pericardial sac and a very small amount in the left pleural cavity.

A brief reference to the following cases of paracentesis thoracis may not prove uninteresting on account of their successful result: We have had occasion recently (June 18) to remove with the aspirator one quart and four ounces of fluid from the left pleural sac in a case of hydrothorax—the patient leaving the hospital five days afterwards to return to his business; there had been ectopia cordis—the heart being pushed two inches to the right of the right border of the sternum and returning to its true position after the tapping; but operations of this character scarcely require to be reported in detail.

In two other instances similarly rapid and complete relief was afforded by the withdrawal of fifty-four ounces (three pints and six ounces), and two quarts and two ounces respectively; and in a fourth case, seen in consultation with a friend (Dr. W. M. Michel), nine measured pints were removed at one sitting. The defect is that such cases are often not recognized and relieved as early as they should be, but when they are, they constitute striking examples of the efficiency and utility of the study and practice of auscultation and percussion—if such were needed.

Since writing the above article, and in contrast to the cases related above, a man came under my care (July 28th) with complete dullness over the entire left thorax, fore and back, from apex to diaphragm. He refused to be tapped. A blister was applied to the back of the lung. Iodide of potash and a diuretic drink were ordered. After three days the patient went out of the hospital for a few hours; upon his return, he had a rupture between the pleural cavity and

the bronchial tubes, and pints of pleuritic fluid mingled with fetid air poured from his mouth and nose; he was suffocated and died in a few moments.

Aspiration would have relieved him, at least temporarily, and this would have been a suitable case for drainage and the injection of a solution of carbolic acid or other disinfectant. Paracentesis of the pericardium would also have greatly benefitted him. The presence of fluid in the chest is easy to detect, but to predict its nature is not all "plain sailing."

At the autopsy I found circumscribed gangrene, a non purulent pleuritic fluid (albuminous of course), and a yellow fibrous exudation half an inch thick lining the pleura, with condensation of the lung tissue. The fluid and air having been imprisoned, was yet not perceptibly offensive, or apparently even hurtful, except in causing a slight previous hæmorrhage. The pericardial sac was *filled* with clear serous fluid.

The subject, a very healthy looking Belgian of education, and though leading an exposed life, and temperate in his habits, had never been confined to his bed, or had any pain or fever, or knowingly any signs of pleurisy—his respiration only being increased in frequency (twenty-eight to the minute.)

ART. IV.—**Note on the Value of the Term General Functional Neurasthenia.** By C. H. HUGHES, M. D., St. Louis.

The *Virginia Medical Monthly* while doing me the honor to copy in the main my late contribution to the subject of neurasthenia, as I prefer to call it, or as it has been designated by others, neurasthenia, thinks that while the paper contains "some things worthy of permanent record" and demonstrates the sincerity of this complimentary statement by giving them place in its valuable pages, nevertheless considers the term nervous exhaustion preferable, and thinks "the culminating conclusion of my paper had better not been recorded."

A criticism from the standard *Medical Monthly*, of the "Old Dominion," is always worthy of notice, and no other apology is needed for what follows.

The term neurasthenia is the expression of a functional condition only. Nervous exhaustion may be, and often is, muscular exhaustion. It may be secondary to and often is the sequence of physical diseases of various kinds, needless to enumerate. But what is meant, but not expressed, by neurasthenia by Dr. George M. Beard, who has given more emphasis to the term than any one else by what he has written on the subject, is exhaustion of the nervous system pure and simple without the accompanying gravity of structural lesion, which entitles the condition to be classified with other diseases of the nervous system, such as tabes, paralysis, etc.

Neurasthenia is a functional exhaustion of the nervous system generally without appreciable structural change and without other disease of the system causing it. *It is a pure neuratrophia, with neurasthenia as its functional expression.* The atonic condition of the nervous system in neurasthenia is due to its failure to appropriate from the blood the materials for its daily reconstruction up to the normal measure of functional activity, and the term I have proposed finds its justification in this fact and should be preferred. It is not intended to supplant neurasthenia as an expression of the symptomatic condition indicated by "nervous exhaustion," but to supplement and explain its pathological basis, and as such, we think, upon reflection and criticism, it will find and keep an appropriate place in medical nomenclature.

The use of the term neuratrophia and close adherence to its signification as the basis of neurasthenia, which it undoubtedly is, would have materially aided Dr. Beard in more correctly circumscribing the symptomatology of neurasthenia.

Dr. Beard has done the profession a service in fastening medical attention on those important conditions of the system in which no local lesion in any organ or in the blood necessarily exists, and in which no structural change in the nervous system is discernible, but the fact was observed before him, and the *term* was used before him, and in similar but less extended significance. We think Dr. Beard has extended the meaning of the term too far in his symptomatology, and been needlessly voluminous and "*numerous*" in his symptomatic nosology.

The terms we have added in our paper, *thanatophobia*, *necrophobia*, *necropolophobia*, etc., express mental states as real among *neuratrophics* as the phobias described by Esquirol, Beard and intermediate writers. But, after all, if symptoms exist, they may as well be named, and they will be named, by others if we do not name them ourself. The name of the psychic signs of neuratrophia, however, might be legion to an expert philologist. The one symptom of all others most prominent and prevalent, underlying them all, is *the timidity not natural to the individual*. This is the sign of neurasthenia, and pure *neurasthenia* is the sign of *neuratrophia*.

Clinical Reports.

Case of Extra-Uterine Pregnancy. By J. R. GODWIN, M. D.,
Fincastle, Va.

On the 8th of December, 1881, I was called to see Ellen Hawkins, a negress, aged 36 years, and this is the history of her case stated as briefly as possible.

She has never been married, but has borne two children. The first went to full term, but lived only a few hours after birth. The second went to full term, but was born dead and was deformed.

In *March*, 1878, Ellen ceased to menstruate. As time wore on, she was pronounced in the "family way," and her figure gradually assumed that of a pregnant woman. In December following she was taken in labor, and was in this condition for several days, but had no medical attention. The pains gradually wore off, and Ellen, thinking there was a *mistake* somewhere, resumed her duties as a servant. At the end of three months, the catamenia were re-established and continued regularly for nine months, and then ceased. After this the health began to fail, her size to decrease, and a train of very uncomfortable symptoms to follow, and for some months she was confined to her room and bed. Her case was reported to me at various times by her friends, and without an opportunity for examination, I pronounced it a case of extra-uterine pregnancy, and was sustained in this belief by other members of the profession. The mother of the woman told me that one or two physicians had examined

her and pronounced it an ovarian tumor. Such is the history of the case up to the time of my visit.

I found this unfortunate woman in a truly pitiable condition. She said she had no rest day or night, had but little appetite, and she was very much emaciated. Indeed, she was almost entirely helpless. Though the room was cleanly and well furnished, there emanated from her person a smell that was truly trying to a weak stomach, but, fortunately, being strong in that respect, I did not shrink from making the necessary examination. About two inches below the navel and a little to the left of the median line, I found a small opening, from which an *extremely* offensive discharge was pouring. There had been a similar opening in the navel itself, through which, the mother said, some fecal matter had passed, but I told her she must be mistaken, and disregarded the statement entirely. She also showed me a small piece of the skin of a tomato, which she said passed through this opening, but I likewise paid little attention to this statement. This opening in the navel had been closed for 8 or 10 days, and the one below had made its appearance since. The mother here produced a bone with the remark, "this came through the opening to-day." I discovered it to be one of the cervical vertebræ of a fœtus. I passed a probe into the opening, and could distinctly feel the comminuted mass of a decayed child.

Two days afterwards, on the 10th of December, in company with Dr. Cyrus Doggett and a very intelligent layman, I proceeded to relieve the poor creature of this mass of putrefaction. After being thoroughly chloroformed by Dr. Doggett, I made an incision from the opening up to the navel, and with a pair of forceps removed the debris. On removing the cranial bones, I had to enlarge the incision. As the contents were removed, the sac contracted, and, when it was entirely emptied, I washed it out thoroughly, and with the index finger could entirely circumscribe it. It was fast grown to the walls of the abdomen, and was, of course, included in the whole incision. Not one ounce of blood was lost during the whole operation. Entirely disregarding the remark of the mother, that fecal matter had passed through the opening, I did not search for any communication between the sac and the bowel. The wound was closed with silk sutures and secured with adhesive strips, compress and bandage.

Ellen passed from under the chloroform readily and without the least uncomfortable feeling, spent a quiet night, and

on visiting her the next morning, she expressed herself as feeling better than she had done for months.

In looking over the bones of the removed fœtus, we missed a humerus, and on visiting our patient the next day, the mother produced the missing bone, telling us she found it in the night glass that Ellen had used that day.

On removing the dressing 24 hours after the operation, I found a curious looking discharge on the compress. It was entirely without fœcal odor, but was evidently from the bowel, as it bore unmistakable signs of bile coloring, and was in a state of fermentation. The remark of the mother then occurred to us, and we were satisfied that there was a communication with the bowel. Upon consultation, we thought it best not to re-open the wound, but trust to the gradual filling up and obliteration of the sac and a closure of the opening in the bowel by adhesion to the walls of the abdomen.

The woman began to improve at once, and without a single untoward symptom made a rapid recovery, and in a short time was able to attend to her former duties. To-day she is a robust, healthy woman, and is a servant at the Old Sweet Springs, Monroe county, W. Va.

A few days before she left for the Springs, I visited her in company with Drs. Doggett and Glasgow, of Fincastle. On examination, we found the womb in a healthy condition. At the site of the incision there is a fistulous opening, quite small, and through it I passed a silver probe for a short distance. The bandage was stained with a dark discharge, small in quantity, and containing some small particles, which, upon close examination, we found to be the seeds of blackberries, which Ellen said she had eaten in the morning. Said she, the discharge was gradually growing less, and I hope the opening may finally close entirely.

In submitting this case for publication, I claim no merit for having performed a brilliant surgical operation, but I wish to call the attention of the profession to one prominent point in its history, which is truly remarkable, and to which, with my limited knowledge, there is not a parallel.

Cases of extra-uterine pregnancy are not rare, and successful operations have been performed for their relief; but is there a case on record where nature became her own surgeon, furnished her own *instruments*, and partially succeeded in ridding herself of such a corrupt mass?

And not only did she use the serrated edges of these cranial bones to saw through the walls of the abdomen and let out the debris of her abnormal conception, but she withheld not the very vitals of her victim, in that she incised the bowels so as to make another exist for her foul contents, which *did not enter in at the mouth*, but is cast out into the draught.

The adhesive attachment of this sac to the walls of the abdomen deprived one of a positive opinion as to its origin, but, of course, somewhere to the uterine appendages. There is also necessarily an intestinal attachment, but at what point I am unable to say; but from the character of the discharge and the fact that the matter is colored by the bile, I should think it was at the upper part of the jejunum.

Correspondence.

Medical Aid Association.

Editor Virginia Medical Monthly,—I have just read your editorial (August number) on the "Medical Aid Association," which you deem worthy the consideration of the State Society at its next meeting. Allow me, as a member of the State Society and a subscriber to your journal, a limited space in your September number.

Instead of said "Medical Aid Association," allow me to propose one of two substitutes. For the first, let us organize a "Medical Shoe Making and Mending Association"—shoes for ourselves, shoes for our wives, and shoes for our children—good shoes, cheap shoes, and medicated shoes if you please! Let the younger members of our profession who have plenty of leisure and no wives and no children, devote their spare moments to making and mending shoes for their more fortunate professional brethren. This will not only be very nice for said fortunate ones, but said unfortunate ones may thus learn a good trade, which may suit some of them better than a profession. (Being myself one of the unfortunates, I sneer at no one.)

And for the second, I propose a "Medical *Old Clothes* As-

sociation," whereby our nobby town doctors, instead of giving to servants and poor relatives their soiled raiment, may place it in the hands of the President and Board of Trustees, and thus supply for a small consideration the wants of the shabby genteel member. And when it has been by him duly greased and glazed, let it again revert to the President and Board of Trustees, either to supply the wants of the abjectly poor in our profession, to be given to the widows and orphans, or to be made over into shoddy, as in their wisdom seemeth to them best.

I object to the "Medical Aid Association" because we have all over our land well organized "Life Insurance Companies," wherein any physician can insure if he cares to do so and can raise the money. These companies are conducted by men whose sole business is to make them successful, giving them their entire time and attention. The practical working of these must needs be better than that of a company organized among physicians, whose previous training by no means fits them for such business, and whose professional responsibilities cannot add to their capability of managing joint stock companies.

But if our Medical Society of Virginia has more time at her disposal than can be devoted to professional matters, let her either shorten her sessions or amuse herself in trying to supply such wants among her children as may have no well organized and legitimate source of supply.

Respectfully, JESSE EWELL, JR., M. D.

Aldie, Loudoun Co., Va., August 8, 1882.

[We are glad to have the opinions of our subscribers, and members of the State Society, though they may differ from those of the Editor.]

Ribs and Hugging.—A California paper tells of a young man who broke three ribs of an aged lady—his grandmother. He had not seen her for many years, and in his stalwart arms his aged grand dame gave way. Would a younger subject have fared better?

"**The Condom**," says *Record*, "is a cuirass against pleasure and a cobweb against danger."

Analyses, Selections, etc.

Supposed Death by Chloroform.—By R. A. Kinloch, M. D., of Charleston, S. C. It is desirable that there should be recorded every death attributable to either of the anæsthetic agents in use, for it has hardly been settled that one of these agents should be universally employed because of its immunity from danger. In certain sections of our country and of Europe, chloroform is still the favorite article used, for its general adaptability and because in the largest experience it has proved safe as well as satisfactory. In other sections there is a strong prejudice against chloroform, and a belief that ether is entirely free from danger. I have in an experience of over thirty years, never had occasion to distrust chloroform, and have never until now seen a death attributable to its administration. From very many experiments and observations, however, I have been led to believe that ether is less apt to be followed by nausea or by great depression of vital power. My rule of practice then, in late years, has been to employ chloroform in surgical and obstetrical practice, except in operations necessarily protracted, or where nausea and vomiting would be prejudicial to the condition of the patient. I am inclined to doubt if the death, in the case which follows, can be attributed solely to chloroform. Fright, terrible anxiety, a peculiar nervous organization, and an exalted moral sensibility, may have had much to do with the sad termination. But I prefer reporting the case and leaving it to the verdict of the profession.

Further interest attaches to it from the fact that the secular press has circulated through the country the grossest mis-statements regarding the case itself, and the conduct of the physicians connected with it. I will notice and correct only two of these. It has been falsely stated that assistants were introduced into the operating chamber of the patient against her wishes, and while she was insensible from chloroform. The truth is, the consent of the lady was freely given, because she knew that the assistants were necessary. Her only desire was that she should be chloroformed before they were introduced. Next, it has been affirmed that the cause of death was suppressed in order to shield the physicians, and prevent a coroner's inquest. The truth is, the death (although the matter was rather doubtful) was at once assigned to the chloroform. This was announced frankly to the family of the deceased and to others. Moreover, a

mortuary certificate of death from *chloroform narcosis* was handed to the City Registrar, in order to obtain a permit for burial.

THE CASE.—On the 7th of May, 1882, I was called to attend Mrs. L. R., who had long been an invalid, and been attended before by two very worthy practitioners of this city. She was aged about forty, married, a mother of two children, the last being six years old. I found her thin, anæmic, unable to exercise without much backache; never sleeping well at night; having usually prolonged and profuse menstruation—in the intervals, much leucorrhœal discharge; great bearing-down sensations, with vesical and rectal tenesmus; difficult digestion and constipation. These symptoms, in part, pertained to her since the birth of her first child, but had been more continuous and severe for several months past. There now also is complaint of severe paroxysmal cough, with the physical signs of sub-acute bronchitis on both sides of the chest. The pulmonary symptoms Mrs. R. attributed to a recent cold. She said she had sent for me chiefly to relieve her of the trouble which she had had during many years, and which made life a burden to her. She said she knew the disease to be uterine. Other physicians had treated her for this; but she was in hope that a radical operation might relieve her. There was prevailing an epidemic of whooping-cough, and the children in the house had suffered. Mrs. R. had formerly had this disease, but the character of her pulmonary symptoms led me to believe that she was to some extent suffering from the “epidemic constitution of the atmosphere.” She was anxious for a thorough examination; so, after prescribing for her cough, I appointed an early day for the purpose, and in due time discovered a left lateral fissure of the cervix, reaching to the cervico-vaginal junction; also an elongated and enlarged cervix, a prolapse of the bladder, and prolapse and partial retroversion of the uterus. I gave as my opinion that much could be done by treatment, both local and general, but that, first of all, the cough must be relieved, and the digestive organs improved. In time, I proposed to apply local remedies to the uterine and cervical cavities, and to close the fissure by operation. Mrs. R. was intent upon an early operation, as she said she had too long been trying pilliative remedies. I could with difficulty persuade her that these radical means must for a time be postponed. After about a month’s general treatment, part of which time I was absent from the city, Mrs. R. had so improved that

she again renewed the question of operation, saying that her cough did not now affect her, and that she wanted to be attended to before leaving the city for a summer's vacation. While regarding her as a rather bad subject for an operation, I, nevertheless, thought the cervical fissure could be closed without risk, and that, by the use of a pessary, she could be enabled to go comfortably into the country.

June 19th was appointed for the operation. Mrs. R. had always been exceedingly sensitive as to the matter of personal exposure, and I readily consented to give the chloroform only in the presence of female attendants. When the request was made for the patient to get upon the table, she became much excited, and could scarcely be comforted and assured. She shrank back as one having a feeling of impending danger. I subsequently learned that she had had a presentiment of death, and went so far as to write out requests she wished fulfilled after death. I mention these facts to illustrate the nervous condition of the subject, as with many it may be considered as having something to do with her sad end. The chloroform was given upon a towel folded funnel-fashion. The towel was at first held a little distance from the face, until the patient grew accustomed to the vapor and was habituated to the proper inhalation. The usual period of excitement came on, with some struggling of the arms and rolling of the body. One of the female attendants helped to control these movements, and in a short time relaxation began to be evident, with the slightest stertor of breathing. Less than three drachms of chloroform had been used. I at once suspended the chloroform, passed the towel over to the nurse, who was at the bedside, and a little removed, and asked her to hold it where she was. I felt no apprehension about the patient, and moved to the door separating the chamber from the parlor, and called to Drs. Simons and Pelzer, my assistants, to enter. I now took my position at the foot of the table, while my assistants remained at the side, and began to put the patient into the semi-prone and lateral position for operation. I little thought that during the few seconds of absence the cumulative effects of the drug would be exhibited. Glancing at the face of the patient, I suddenly discovered that it was cyanosed, and the eyes staring and fixed. I called to Dr. Simons to notice if the breathing was right, and almost simultaneously we both advanced to the patient's head. I saw that the respiration was embarrassed, and heard a gurgling noise coming from the presence of mucous secretions in the bronchii. Dr. Simons raised the head of the pa-

tient, and turned the body partly over into the supine position. I threw up the windows, dashed cold water upon the face and chest, slapped the surface smartly, depressed the head, while the body and lower extremities were raised, injected brandy, and subsequently liquor ammonia and brandy, subcutaneously. Towels were wrung out of very hot water and applied over cardiac region. Used galvanic battery as soon as this could be secured. Finally, noticing that the respiratory movements were now entirely arrested, also the action of the heart, while the veins of the neck were greatly distended, I opened, first, a vein at the bend of the arm, and afterwards the right external jugular, hoping that, by removing some of the dark blood from the cavities of the heart, this organ would have a better chance for contracting. All to no purpose—the heart remained paralyzed, and we had soon to realize the fearful fact that death had supervened.

[The above report appears almost simultaneously in several of the Medical Journals of the country—the original copy having been sent by the author to the *Medical News*, of Philadelphia. Scarcely has any case of death from the legitimate use of chlorform been so generally noised about the United States through the secular press as this one; and we only too cheerfully give place to the full report of the circumstances, prepared as it is by the eminent surgeon and author himself—Dr. Kinloch. We took occasion to refer to the case editorially in our last issue.—Ed.]

Replacing and Healing of Pieces Separated From the Human Body.—G. Halsted Boyland, M. D., M. A. of Baltimore, Md., through the *Medical Gazette* July 29th, says: The experiment of replacing in position portions of the human body hacked from it is of comparatively recent date. The results have been so far satisfactory as to demonstrate conclusively that such parts, when replaced, do heal, and not only heal rapidly, but bind themselves to the main body with surprising strength and compactness, provided always that two cardinal points be strictly observed: 1st, the piece separated must be kept warm to the normal temperature of the body; 2nd, it must be replaced, whether with adhesive plaster or the suture, or both, directly the flow of blood ceases. The following cases are such as frequently come under the observation of medical men abroad.

In the first case, in a duel with schlaggers (a weapon something like a rapier, but with a flatter blade, of about the

same length and blunt at the end), the left ala with a part of the point of the nose of one of the principals, by a sweep of his atagonist's sword,—this piece containing skin, muscles, cartilage and mucous membrane—was cut by a clean wound, square off. It was at once put back into position, sewed on with fine sutures; over the sutures strips of adhesive plaster were applied, extending over the whole point and side of the nose on to the cheeks; in order to prevent evaporation and drying as much as possible a patch of oiled silk, and upon this cotton batting were placed, the nose being tamponed also with it at the same time. On the third day the sutures were taken out and the piece found to be quite black; the whole epidermis sloughed off as a black crust, but under it the normal rete malphigii appeared, and one small portion of the epidermis remained. After a time a layer of horny epithelium put out. At the expiration of nine months the wounded man appears with the left nasal ala slightly flattened and of normal color, the surface of the portion that had been cut off made one with the whole side of the nose, no distinct line marking a cicatrix: on some parts of it the epithelium was a little thicker than on others, making a few very small rough places. It is worthy of attention that on the third day when the sutures were removed and the epidermis had sloughed off, the part was firm in its natural position. The sloughing of the epidermis is easily accounted for by the fact that the capillaries became contracted and, so to speak, dead, on account of their extreme fineness, during even the very short time that the piece was separated from the body. We would recommend in such an emergency a process carried out in another case that came under our own observation, viz: that the separated portion be held in the mouth, if warm water cannot be procured, until the suture and all is ready—thereby the animal heat would be retained and the chances of sloughing of the epidermis materially diminished.

The next case was a student who had fought a duel also with schlaggers, out of whose nose a polygon-like piece was hacked just above and including the tip of the nose, thereby exposing in extenso both nares. This piece was only found after long search, having been thrown by the force of the blow some distance; after the bleeding had ceased it was placed in position. Likewise in this case the greater portion of the epidermis came off in the shape of a black crust. The piece, when healed on, was bordered on all sides by a sharp-edge scar, its color being red and the part itself slightly tumefied. The wound left on the nose at the time was clean

and even bordered, as regards the skin, while the cartilage and mucous membrane were separated, irregular and zig-zag. The same treatment with reference to detail of placing in position sutures, adhesive plaster, etc., was carried out in these cases, although the large scar and red color, accompanied by tumefaction, would indicate a less successful result than in the first case mentioned. The length of time that elapsed before the separated piece could be found comes also into consideration, although adhesion takes place more readily after the bleeding ceases; nevertheless, if the parts are left disunited too long, the inclination to adhesion is lost entirely, as it begins to diminish as soon as the main wound commences to dry, the surfaces of wounds of medium size of this character being for some little time moist with a gelatinous substance composed of blood and serum.

As regards the healing itself it is a *prima intentio*, although the sutures in these cases were only removed on the third day. In treating wounds *per primam*, in which pieces are not separated from the human body, v. Bruns removes them in twenty-four hours.

As for the pathological anatomy, or, more properly speaking, the process of healing itself, such cases undoubtedly illustrate that the vessels of the piece, after being placed in position, received in the lumen of each the blood from the severed vessels of the borders of the wound on the nose. In unfavorable cases, a hemorrhagic infiltration of the separated piece, after it is placed in position which may be followed by mummification, is liable to result. In the more successful ones the epithelial covering is everywhere thrown off. In those again where the surgeon is especially fortunate the circulation in the *whole of the* portion separated or in parts of the same, may re-establish itself without any disturbance as to nutrition. Of importance in the healing of wounds upon which transplantation of skin grafting may be carried out, is the proof here deduced, that in transplantation there is a direct flow of blood out of the granulation vessels of the main wound into those of the transplanted piece. In this operation, which is known as Reverdin's transplantation, sloughing of the epidermis is a general rule, which, nevertheless, like all others has its exceptions; but they are very few and very far between. Technically, where portions of the flesh are severed from the human body, the above procedure is the best to follow, practically, it is the most successful.

In a recent number of the *Boston Medical and Surgical*

Journal is recorded a case in which the hand, almost entirely severed at the wrist, hung to the forearm by a thread of skin only. Instead of amputation the hand was replaced on the above principles and kept firmly in position for a long time, finally it *reunited completely*, and the patient had considerable use of it, being able to move the fingers. As long as the merest thread connects the divided part to the main limb, so long the circulation may go on in a part of it, gradually re-establish itself throughout and thus save the limb or member, and often the life of the patient.

Post-Paralytic Chorea.—In a paper read at the recent meeting of the American Neurological Association by Dr. A. D. Rockwell, electro-therapeutist to the Woman's Hospital, New York, and published in the *New York Medical Journal and Obstetrical Review* for August, 1882, the author relates a case of post-paralytic chorea treated by the application of ether spray to the spine, the internal use of conium, and the employment of central galvanization. The patient was cured in ten weeks, although the affection was severe and of a year's duration. In regard to the efficacy of the ether spray the author is in doubt, but is inclined to regard it as of but little value. In two cases of chorea where the measure was exclusively attempted, in one instance for two, and in another for four weeks, there was but little, if any, modification of the symptoms. Out of a very considerable number of cases of chorea that he has treated, both with and without the spray as an adjunct, the choreic symptoms have seemed to subside as readily in one instance as in the other. There has been, however, so much testimony to its value, and the operation is so easily performed by the friends of the patient at home, that he usually approves of its use. He has much more confidence in the efficacy of conium, but, in face of the numerous remedies, each one of which has at times been proclaimed to be the best, he hesitates to speak in very positive terms. As has been said of iron, zinc, arsenic, strychnia, etc., so perhaps it might be remarked of conium, that it is the readiness with which the ordinary case of chorea tends to recover, quite as much as the efficiency of the remedies, that has given them such repute in this condition. In the case related he began with five-drop doses of the fluid extract thrice daily, adding a drop each day, until the dose reached twenty-five drops. He regards conium as occasionally of positive value in the treatment of chorea in its more chronic form, evident amelioration having followed its exclusive use

in several of his cases. Although in the beginning the dose should be small, yet it should be pushed to a much higher point than is generally done. In regard to the value of electrical applications, he still holds the same favorable opinion as formerly, and, with added experience, claims the same position for it in its relation to this disease. And yet, he admits, there is much adverse testimony as to its value. He accounts for the unsatisfactory results obtained by some observers on the ground of a possible incompleteness of the methods of application, or a lack of persistency in the efforts made. Electro-therapeutical measures should be, to a large extent, matters of detail, and in few diseases is this attention to thoroughness of treatment more imperative than in chorea. Localized applications will not as a rule command success. General faradization and central galvanization he believes to be the essential methods of procedure; and these, when attempted, should be carried out with as much care and precision as other important processes. After thoroughly wetting the hair, his method is, in central galvanization, to apply to the head a sponge-cap electrode sufficiently large to cover almost its entire surface. The current is then gradually increased, without interruptions, to the point of easy endurance. In the case related he habitually made use of thirty to thirty-six zinc-carbon cells, or, to speak more accurately, a current strength of about forty-five volts. He adds a caution against passing through the head of a child, or even that of an adult, a current of the same power without due precaution in regard to the *size* and *position* of the electrodes, and to the gradual increase and as gradual decrease of its strength. By attention to these points, however, much can be accomplished that would otherwise be impossible.

The Treatment of Hæmorrhoids by Injections of Carbolic Acid.
Dr. Charles B. Kelsey, Surgeon to St. Paul's Infirmary for Diseases of the Rectum, New York, recently opened a discussion on the treatment of hæmorrhoids, at a meeting of the New York Clinical Society, by reading a paper on the treatment by injections of carbolic acid. The paper, which appears in the August number of the *New York Medical Journal and Obstetrical Review*, opens with condensed histories of a number of cases, after which he remarks that, beginning this plan of treatment without very much confidence in it, and with the fear of causing great pain, and, perhaps, dangerous sloughing, constantly before him, the method is constantly growing in favor with him, and the more he prac-

tices it the more confidence he gains in it. With solutions of proper strength the danger of causing sloughing of the tumors is very slight. There are no objections to this method which do not apply equally to others. He has once seen considerable ulceration result from it in the hands of another; but he has seen an equal amount follow the application of the ligature; and he does not consider this as a danger greatly to be feared when injections of proper strength are introduced in the proper way. It is applicable to all cases; is especially adapted to bad cases; and may be used where a cutting operation is inadmissible. It acts by setting up an amount of irritation within the tumor which results in an increase of connective tissue, a closure of the vascular loops, and a consequent hardening and decrease in the size of the hæmorrhoid. Except when sloughing occurs, the tumors are not, therefore, removed, but are rendered inert, so that they no longer either bleed or come down outside of the body. In cases in which the sphincter has become weakened by distension, the injections will also have a decided effect in contracting the anal orifice, as injections of ergot or strychnine do in cases of prolapsus. He has used this method of treatment now many times, and has never, except in one case, had reason to regret using it or to be dissatisfied with its results, so far as he has been able to follow them. Although slow to advocate any one treatment of this affection to the exclusion of all others, he now generally adopts this from the outset in each case, reserving Allingham's operation for any in which the injections may fail. As yet he has met with no such case. Its advantages over all other methods, provided its results prove equally satisfactory, are manifest. The patient is not terrified at the outset by the prospect of a surgical operation, is not confined to his bed, and is not subjected to any suffering. The cure goes on painlessly, and almost without his consciousness. The method requires some practice and some skill in manipulation, in getting a good view of the point to be injected, and in making the injection properly; but this is soon acquired; and he is more and more convinced that the fear of producing ulceration is an exaggerated one, and that when ulceration is produced, it is a result either of a solution of too great strength, or of one improperly administered.

Therapeutic Uses of Nitro-Glycerin.—In the October No., 1881, Dr. Wm. A. Hammond, of New York city, contributed to the pages of the *Virginia Medical Monthly* an article

pointing out some of the medical uses of nitro-glycerine. Since the appearance of that article by the Surgeon General (which related mostly to the modes of administration, its value in migraine and epilepsy), a number of observers have been experimenting with the agent. Among the reports which have been given, we find the following in the *Canada Medical Journal*, for May, 1882, which throws more light on the subject:

Prof. Kroczyński, of Cracow, in the *Wien. Med. Woch.*, gives the following observations on nitro-glycerin:

In six persons afflicted with attacks of bronchial asthma in consequence of extensive emphysema of the lungs, the nitro-glycerin controlled or lessened very materially the attacks of difficult breathing in the course of a few minutes, seldom later than a quarter of an hour, if taken at the beginning of an attack. After using the nitro-glycerin regularly for some time the attacks wholly disappeared in four out of the six.

In thirteen cases of idiopathic nervous asthma the success was really little. Of the thirteen cases there was almost no improvement in seven, two of which occurred in hysterical persons, in four the benefit was doubtful; but in two, accompanied with bronchial catarrh, it was positive.

In two cases of steno-cardia caused by aortic aneurism, the remedy acted very promptly, for the attacks disappeared each time soon and fully. By a lengthy and methodical use of the drug the attacks ceased altogether in one of the cases.

In three examples of palpitation of the heart the result was extremely satisfactory. In two, which were clearly of nervous origin, the palpitation disappeared completely on the repeated exhibition of the drug; in the third case, where an insufficiency of the semilunar valves of the aorta existed, the attacks ceased for the time after the occasional use of the remedy at their commencement.

In six cases of angina pectoris, the results were very doubtful in one, while in the remaining five they were excellent. A few minutes after giving the nitro-glycerin the angina fully ceased or became greatly modified. Prophylactically the remedy was of no use, if there was any anatomical derangement in the heart or vessels; but if of nervous character, it was of considerable value.

In a case of chorea minor, which existed for two years in a congenitally chlorotic maiden, the treatment with bromide of zinc and other agents was quite unsuccessful. On giving nitro-glycerin the abnormal gait became less and disap-

peared completely in twenty-five days. There was great increase in body weight. Against hysteria major, mercurial tremor, and diabetes mellitus, this agent appeared quite useless.

Parsley as an Antilactic.—Dr. Stanislas Martin (*Bull. de Thérap*), after observing that the use of mineral waters interrupted the secretion of milk, states that, as an external application, parsley-leaves act most efficaciously in dispersing it, and that they were used for this purpose by the Roman matrons of old. The breasts should be covered with freshly plucked leaves, and these should be renewed several times a day as fast as they begin to fade. The dispersion of the milk soon takes place. Dr. Dujardin-Beaumetz confirms Dr. Martin's statement, and adds that in Asia Minor parsley, in the form of large cataplasms, is used by the women as an ordinary domestic remedy.—*The Practitioner*.—*Lancet and Clinic*, July 1882.

A Heavy Brain.—Dr. Davis Halderman reports in the *Cin. Lancet and Clinic* (July 22), the brain of a mulatto that weighed 61 ounces. The weighing was several times repeated in the presence of witnesses. The accuracy of the scales were carefully tested. The brain of Cuvier weighed 64.33 ounces, that of Abercrombie 63 ounces. The mulatto had been a slave in Tennessee until 1862; he was never regarded as possessing much intellectual brightness.

Deleterious Effects of Boracic Acid.—Since Dumas showed for the first time, now nearly twenty years ago, that borax had, like carbolic acid and other antiseptics, the property of preventing fermentation, it has formed part of several antiseptic mixtures of salts proposed by various inventors for the preservation of meat, fruits, vegetables, etc. Boracic acid has likewise come in for its share of patronage in this respect; and lately, Prof. Barth has brought forward a mixture of glycerine and boracic acid, which, according to his experiments, possesses the power of preserving various perishable substances in a remarkable manner. The same may be said of corrosive sublimate, arsenious acid, and a quantity of other chemical products which we should be sorry to see used to preserve articles of diet in daily use. However small the quantity of these substances which may be used in order to exert the preservative effect, it is evident that by the daily consumption of substances so preserved, the animal

economy absorbs in the long run a large amount, and in a longer or shorter interval the health is impaired.

Such, according to Mr. Gade, is the case with boracic acid, as he states in a letter to the *Times*, which is reproduced in the *British Medical Journal* and other periodicals. Mr. Gade, while residing in Sweden, used boracic acid to preserve the milk supplied to his household from decomposition. For some time no ill effects were noticed, but after using the milk for a short time two of his young children fell ill; they became languid and drowsy, and their appetites failed. This was at first attributed to the hot weather, during which the boracic acid had preserved the milk quite sweet and pure; but it was soon traced to this article of diet, and a physician who was called in had no doubt of it, the boracic acid acting, as he said, as an anodyne. The *British Medical Journal*, in its comments on this, while admitting that "the action of boracic acid has not been much investigated," nevertheless boldly asserts that "it cannot be a poison of much strength;" but as it is now a well known germicide, its effects on man cannot be inert.—*Scientific American*.

Eye-Headache.—Dr. Chisolm called attention to a class of astigmatic troubles due to excessive eye-effort, and related in illustration the case of a young lady seen to-day, who does not remember a day when she was free from headache; all her life she has had it, and no treatment has relieved her. Yet the first instillation of a four-ounce solution of atropia put an end to it by correcting the astigmatism upon which it depended. The pain is not limited in these cases, but may extend to back of head, neck, and upper extremities. Astigmatic glasses are required.—*Maryland Med. Jour.*

Sanitary Conditions in Surgery.—The following are the conclusions of the paper read by Prof. James L. Cabell, at the recent meeting of the American Surgical Association in Philadelphia:

Septic complications have heretofore been, and often are still, the most fruitful causes of mortality after operations in hospitals where their malignant effects are observed after secondary as well as primary amputations. Much may be done to prevent the development of septic poison by careful and untiring attention to sanitary precautions, including all the details of personal and hospital hygiene. After securing all that can be accomplished by patient and scrupulous attention to sanitary arrangements, with a view to render the at-

mosphere of a hospital comparatively aseptic, there is good reason to believe that an additional protection of great value may be derived from the use of antiseptic precautions practiced in conformity with the Listerian principle. "Listerianism," practiced *de rigueur*, while not so essential in cases of amputation, where it may often be superseded by drainage and perfect cleanliness, has achieved results in operations on joints and in treatment of "abscesses by congestion," which have not been paralleled by any other system of treatment. The highest success has been attained without the precautions of Lister; nevertheless, preponderance of evidence is in favor of its utility in ovariectomy and abdominal sections generally, although marvelously good results have been obtained without special antiseptics, by careful attention to other sanitary arrangements.—*Maryland Medical Journal*.

Revulsives.—During my recent trip through portions of Mexico, some peculiar practice was observed. Being ever ready to absorb any new crumbs of science, prompted me to travel through that strange country with eyes wide open. The natives have a very successful mode of allaying or mitigating pain—the old theory of "revulsion" put into thorough practice. Several severe headaches were quickly relieved by rapidly chafing or scratching some remote part of the body. Stomach-cramp was apparently thoroughly relieved by rapidly scratching the arm of the patient. And a child, suffering with extremely painful ophthalmia, was quickly lulled to sleep by rubbing the feet and limbs with a soft silk handkerchief. Perhaps our friend Dr. Brown Sequard has been traveling in Mexico, and there discovered his successful mode of treating hysteria, by causing firm and constant pressure over the ovary, which was found to be irritated and often swollen during a prolonged attack of the disease, especially the convulsive form. I might enumerate many other affections and conditions where the principle was put into practice with a will and determination that seemed always to insure entire success.—*Chicago Med. Times*, July, 1882.

Much Sickness and Mortality prevail among the laborers employed on the works of the Panama Canal. During the greater part of the year the heat is very intense; but the total absence of any proper sanitary arrangements is said to be a far greater factor in the production of disease than the unhealthiness of the climate.

Traumatic Tetanus Treated with Eserine.—Dr. Thomas Layton reports a case of tetanus occurring in a boy, aged eleven years, following, after an interval of three weeks, the wounding of the sole of the foot with a splinter. Chloral, bromide of potassium, and cannabis indica were employed without benefit. Eserine was then administered in doses of 1.64th grain every hour. Recovery took place. Dr. Layton calls attention to the following points:

1. The child took a *full adult dose* of the sulphate of eserine every hour for several days, and not only were there at no time symptoms of poisoning, but the beneficial action of the remedy was apparently manifest.

2. There was never the least contraction of the pupils. On two occasions, as mentioned in the observation, the pupils were *dilated*; at all other times they responded to light in a normal manner.

3. It was noticed that the sulphate of eserine increased either the secretion of tears and saliva, or defecation; with regard to the last, an occasional purgative had to be employed during the progress of the case.—*New Orleans Med. and Surg. Jour.*

Hamamelis Virginica.—M. Ferrand, in a recent essay of his, confirms the investigations of Hale, as regards the value of witchhazel as a therapeutic agent of great value for almost all inflammatory or congestive affections; he further attributes to it rapid analgesic effects. The preparation he prescribes locally is the tincture $\frac{1}{3}$, English glycerine $\frac{2}{3}$; internally he gives the tincture in doses of twenty-five drops in a dessertspoonful of water, four to twelve times a day. From which practice, he reports to have obtained good results in cases of pharyngitis, laryngitis, conjunctivitis, metritis and varicose veins.—*Le Progres Médical.*

Omnivorous Eccentricities.—We were last week favored by Mr. Benthall, of Derby, with the report of a case treated at the Derby Infirmary. It was that of a man who swallowed some coins in an attempt to secrete them in his pharynx. We were then unable to state the result of the case. It may now interest some of our readers to know that the patient went to the Infirmary on the morning of the 6th of June, and produced four pennies and a half-penny, which he stated he had passed in one motion the day before. The coins were much blackened by their sojourn of three weeks in the alimentary canal.—*Brit. Med. Jour.*

Treatment of Gunshot Wounds of the Abdomen in Relation to Modern Peritoneal Surgery.—Dr. J. Marion Sims contributed a most excellent article on this subject to the *British Medical Journal*, which we reproduce from the *Chicago Medical Journal*, July, 1882:

Occasionally, wounds of the abdomen above the brim of the pelvis recover; but it is always when there is a chance for drainage. Dr. Pallen saw a Confederate soldier recover, where a large part of the abdominal parietes were blown off by a bursting shell. The wound was immense, and diagonally across the abdomen. The bowels fell on the ground, but were not wounded. They were washed clean, returned to their proper place, and the wound was closed as well as possible with strong coarse thread, leaving an open space six inches long and two inches wide, through which the intestines could be seen. They were retained *in situ* by compress and bandage, and the man eventually recovered without a single drawback. He recovered because the intestines were not injured, and because there was drainage. This was a case in which we might have supposed there was danger of peritonitis; but peritonitis and free drainage are antagonistic.

Dr. Newall, of New Brunswick, New Jersey, reports to me the following interesting case: A large man, with a "full abdomen," shot himself accidentally with a shot-gun in 1847. The charge entered the abdomen an inch below the sternum, and to the left of the median line. Introducing the finger, Dr. Newall plainly felt the left lobe of the liver and the inner wall of the abdomen. The next day twenty-nine shot passed the bowels. Three shot made their exit one inch and a half above the crest of the ilium, and three and a half inches from the spine. "An incision was made here into the cavity of the abdomen, and I removed the gunwad, composed of tow, paper, shot, a printer's type and a piece of the man's vest—in all, sufficient to fill a tumbler half full. The patient was kept under the influence of opium for several days. He recovered completely, and is now living." In this case Dr. Newall did, thirty-four years ago, what I now advise to be done in all cases of gun-shot wounds of the abdominal cavity. His patient was saved by the removal of foreign bodies, and by an opening in the iliac region, which permitted free drainage.

Having now brought forward all the facts observed by myself and by personal friends, let us turn to the records of the American Civil War for further facts illustrating this important question.

1. *Wounds of the Stomach.*—There were sixty-four shot wounds of the stomach, more or less complicated with wounds of neighboring parts. There was but one well authenticated case of recovery. Other reported cases of recovery were carefully analyzed by Dr. Otis, and pronounced wholly unreliable.

There were nine cases of bayonet wounds penetrating the peritoneal cavity without lesion of viscera. Six terminated favorably. Seven had traumatic peritonitis. The diagnoses were not clear in every case.

There were four fatal punctured or incised wounds of the stomach. Five fatal shot wounds are reported as having survived seven, eight and nine days, and one forty days. The length of time that these survived indicates clearly how different the result might have been in some of them, if prompt measures had been taken for exploring the seat and nature of the wound, and resorting to gastroraphy, the only rational treatment in such cases. There was not a single case of gastroraphy during the whole war. This is explained by the fact that the stomach does not prolapse through an ordinary bullet wound; and surgeons did not then dare to enlarge such wounds to investigate the nature and extent of internal injuries.

There were three cases of secondary fistulæ, which terminated fatally. One lived four weeks, another seven weeks, and the third eighty days. Timely interference and gastroraphy would almost certainly have saved all of them.

Considering the facility and comparative safety with which gastric fistulæ are now established by surgical means, it is a little surprising that (according to Otis) we have the record of but two cases which have survived shot wounds of the stomach for any length of time. The first "is that of Maillot, wounded in Möllendorf's repulse of the French at Kaiserslautern, in May, 1794. In this little known, but authentic case, recorded by Baron Percy, the fistulæ gradually contracted, and ultimately closed." The other is the well-known case of Alexis St. Martin, made famous by Beaumont, who, nearly fifty years ago (1835) published an account of the digestibility of various articles of diet as observed in the stomach of St. Martin. Beaumont states that St. Martin, a Canadian, of French parentage, was about eighteen years old when wounded (June 6, 1822) at Fort Mackinaw, where Dr. Beaumont was stationed as surgeon to the post. As St. Martin died only a few months ago, he survived injury about fifty-nine years.

Dr. Otis sums up wounds of the stomach in the following words: There were "four fatal punctured or incised wounds; one incontestible recovery from a shot perforation; a few recoveries from shot wounds in the gastric region, in which the diagnoses were not determined unequivocally; and nearly sixty fatal cases of more or less complicated shot-wounds of the stomach."

The records of military surgery (according to Otis), from its earliest period to the present time, furnish but six or seven well-authenticated cases of recovery from shot-wounds of the stomach, with or without fistula. To this list must now be added another example of recovery from undoubted shot-wound of the stomach. It is the case of the distinguished gynæcologist, Dr. R. Beverly Cole, of San Francisco. I have just received a letter from him, dated London, January 17, 1882, detailing the following particulars: Dr. Beverly Cole, at the age of twenty-five, resided in San Francisco, where he had suffered from repeated attacks of intermittent fever. When just recovering from one of these, he left his house, on June 3, 1854, without taking breakfast; his stomach was therefore empty. Whilst in the act of packing his trunk, preparatory to making a visit to the country, a Colt's six-inch revolver (old pattern) fell from his inside breast coat pocket, the body being bent over the trunk at the time, and the hammer of the pistol striking the edge of the trunk as it fell, the cap was exploded, and the ball entered the breast—the muzzle not being more than eight inches from the body. He did not fall, but, raising himself up, he tore open his vest and shirt, and saw that he was wounded. Syncope occurring, a friend caught and laid him on a sofa near by. When consciousness returned, he found himself surrounded by a number of his medical friends, among whom were Drs. C. S. Tripler and H. S. Hewitt, of the United States Army, and Drs. Valentine Mott, Jr., A. B. Stout and Charles Bertody. He was totally blind, but recognized them all by their voices. He heard Dr. Tripler say: "Never mind the ball; it can be sought for at any future time. We must bring about reaction." Soon after this he was suddenly seized with an indescribable pressure in the rectum, and a desire to defecate. Morphia was administered, sinapisms were applied to the extremities, and ammonia was given in very minute quantities—minute, for fear of its escaping through the gastric wound into the peritoneal cavity. As reaction came on, the sensation in the rectum increased till he vomited nearly a wash-hand bowlful of blood, black and partially coagulated.

It was estimated by the attending physicians to be from a quart to a half-gallon, or more. This gave some relief. But the rectal pain and tenesmus were not completely relieved till he was brought fully under the influence of morphia. As he lay on his back, his clothing was all cut away without turning him on either side, and he was then placed in bed. The collapse was very complete, and several hours elapsed before reaction was fully established. During all this time he could not see; but from the conversation of the surgeons, and from the frequency with which they examined the cardiac region, he inferred that death was imminent. The sinapisms were forgotten, and were not removed for four or five hours, and they produced sloughing ulcers, which were nearly twelve months in healing. When reaction was fully established, Dr. Tripler passed the end of the little finger along the track of the ball, through the conjoined cartilages of the seventh and eighth ribs—an inch and a half to the left of the median line of the ensiform cartilage. He then passed a probe along it into the stomach. The lodgment of the ball was not discovered for two weeks or more later. It was then found between the eleventh and twelfth ribs on the back, two inches to the left of the median line. This showed that the course of the ball was directly through the body—the difference between the parallels of entrance and exit being due to the difference between the bent and the erect posture.

For three weeks he was nourished by the rectum. Beef tea was thus given every three hours; at first one ounce, then two, then three, and finally four ounces. During this time a small quantity of beef tea was given by the mouth, but it produced such severe pain, as it entered the stomach, that it was not soon repeated. Small lumps of ice were allowed to quench the thirst produced by the morphia, which was given in half-grain doses three or four times a day, or whenever needed. On the twelfth day the bowels were moved by enema. On the twenty-first day he was removed to his own home. He then began to suffer from severe paroxysms of pain in the back, which were so intense as to obstruct respiration. They continued without abatement for three weeks. Dr. Tripler then removed the ball, and they ceased. He was confined to bed six weeks. When he got up it was discovered that the left shoulder was lower than the right, the result of a constrained position while in bed; and there was a dragging sensation in the gastric region, not only disagreeable, but quite painful, as if the stomach had formed unnatural adhesions. On account of these disabili-

ties, he was compelled to go on crutches for two years before the body attained its natural erect manner of carriage.

The posterior wound closed in a few days after the removal of the ball; but the anterior wound did not close for four years, which was doubtless due to the injury of the cartilages, which are always tardy in reparation. For many years an ordinarily hearty meal (in consequence of adhesions between the stomach and contiguous parts) produced a dragging, uneasy sensation, which rendered life uncomfortable.

Recovery was eventually complete; and no one now would suspect that he had ever been the subject of such a serious accident. A peculiar feature of the case was total loss of vision for three days, during which time he could not distinguish daylight. There can be no doubt that the ball in this case perforated the stomach. The large quantity of blood vomited soon after the wounding establishes the diagnosis beyond question. From the point of entrance and direction of the ball, it must have passed through the stomach, below the lesser curvature. As the ball was very small, the wound of the stomach was likewise very small; hence there was less probability of gastric effusion than if the ball had been larger. But recovery was chiefly due to the fact that the stomach was quite empty at the time of the accident. If it had been even partially full there would have been effusion into the peritoneal cavity, followed by certain death.

The history of Dr. Beverly Cole's case was published in the *Detroit Medical Journal* in 1855 or 1856, by Dr. C. S. Tripler, United States Army. But as Dr. Otis insinuated, in a note to the *Surgical History of the War* (Part II, "Surgery"), that the case was not incontestably one of the stomach, I place it on record here that others may judge for themselves.

2. *Wounds of Small Intestines.*—Of about six hundred and fifty cases of penetrating wounds of the abdomen during the war, fifty were of the small intestines, eighty-nine of the large intestines, and over five hundred in which the location of the wound was not discriminated, or was complicated with other lesions. Very few sword or bayonet wounds of the abdomen came under treatment, but a number of such injuries were observed among the slain on the field of battle. Wounds of the small intestines are more frequent than those of other portions of the alimentary canal, and are attended with higher mortality. They are more exposed to injury, being less protected by bony structure than other viscera.

The ilium is most exposed, jejunum less, and the duodenum still less. Wounds of this portion of the canal are regarded as almost necessarily fatal. Of shot-wounds of the small intestines during the war, Otis says: "It may still be doubted if an incontestable instance of recovery was observed." There were five cases of wounds of the duodenum, all complicated with wounds of other organs. They all died. One survived eight days: another twenty-four days. If the external wound had been sufficiently enlarged in time, the wounded portions might have been exsected, and the ends sutured, with chance of recovery.

3. *Wounds of Large Intestines*.—Injuries of this group are less fatal than wounds of small intestines. There were a few instances of recovery from shot wounds of the transverse colon; many after perforation of the cæcum and ascending portion of the bowel, and a still larger number in wounds of the sigmoid flexure and contiguous part of the descending colon. Many of these were complicated with injuries of the innominate. Nearly all resulted in fæcal fistulæ, which usually closed after a while without surgical interference. There were, in all, fifty-nine recoveries out of eighty-nine shot wounds of the cæcal and sigmoid extremities of the large intestine. Fæcal fistulæ persisted in nine, and were closed in fifty; seventeen within a month, twenty-eight within a year, and five at periods from one to five years. Ten per cent. of all slain in battle die of wounds of the abdomen, and from three to four per cent. of the wounded who come under treatment are wounded in the abdomen.

4. *Wounds of the Bladder*.—Baron Larry was the first to show that gun-shot wounds of the bladder were less dangerous than those made by puncture or incision; because the tissues are so crushed by the missile that eschars are produced, which protect the connective tissues from urinary infiltration. There was no case of punctured, incised or lacerated wound of the bladder in our war. Of one hundred and eighty-three shot wounds of the bladder, eighty-seven (47.5 per cent.) survived. A large majority of these suffered from grave disabilities, and many from distressing infirmities, a few of them dying after years of suffering; several recovered, with permanent urinary fistulæ. Some had recto-vesical fistulæ, which closed early in a few, and later in others. However, it is rare to find the functions of the bladder perfectly restored after shot injuries. Shot wounds of the bladder are often complicated by the presence of foreign substances in it—such as bullet, bone, or other material—which

serve as nuclei for calculous deposits. There were twenty-one cystotomies for the removal of such formations. Many cases died from infiltration of urine into the cellular tissue, and many from extravasation of urine into the peritoneal cavity. Cystorraphy, recommended by Legouest, was not practised.

The teachings of Vincent, of Lyons, and of Fischer, of Buda-Pesth, at the late International Medical Congress, alluded to in early part of this paper, prove that we may now safely undertake cystorraphy in all wounds of the bladder. Abdominal section, and cystorraphy, and clearing out thoroughly the peritoneal cavity, are the only means of safety in shot or other wounds of the bladder, where there is urinary extravasation into the peritoneum.

5. *Shot Wounds of the Rectum.*—One hundred and three shot-wounds of the rectum were reported, of which forty-four (or 42.7 per cent.) resulted fatally. Thirty-four of the cases, of which four were fatal, were complicated with wounds of the bladder. Fæcal fistulæ, after shot perforation of the rectum, were not uncommon, and were more persistent than cæcal or sigmoid fistulæ. Shot-wounds of the rectum are not so dangerous as those of the upper bowels, but are about on a par with wounds of the cæcal and sigmoid ends of the colon. Hæmorrhage was not a frequent complication of shot-wounds of the rectum.

Inflammation of the Circum-Anal Glands.—While operating for piles lately at the Soho Square Hospital, Mr. Reeves took the opportunity of demonstrating to the visitors present an affection of the circum-anal glands, which is sometimes mistaken for fistula. These glands become the seat of inflammation, and get overdistended. A probe introduced through the small orifice shows that the cavity burrows for about half an inch in various directions. The best treatment is to slit them up and then to touch the exposed surfaces with nitrate of silver. Curiously this small source of irritation is not described in any of the books on surgery.—*New England Medical Monthly*, July, 1882.

Tonga.—Dr. Edward C. Mann (*Ther. Gazette*), in speaking of the efficacy of tonga in an inveterate case of neuralgia appearing after sunstroke, says: All remedies had been tried, including hypodermics of morphia and atropia, when I happened to think of a sample of tonga sent me. I administered half a teaspoonful, and in half an hour the pa-

tient experienced a sense of general warmth diffusing itself over the body, with some slight alleviation of the excruciating pain. After a second dose of half a teaspoonful a sense of drowsiness came on, and sleep with entire relief from pain; the paroxysms decreased in frequency, and are cut short in the manner described. I have put my patient on a constitutional treatment of cod-liver oil and arsenic, with instructions to take up tonga when needed. Dr. Mann adds that he has thus used tonga in this one case, but adds that it was "a typical one of great severity."—*American Medical Digest*, June, 1882.

Cotton Seed in Spasmodic Croup.—Dr. G. L. Gray, in *Miss. Val. Med. Monthly*, states that he has used this remedy successfully. Take a handful of seed, bruise them, boil in a quart of water for a few minutes, let it stand a short time, strain, sweeten, and when cool enough, give the patient all it will drink, or if necessary, pour it into the child. The relief is generally prompt and sometimes without emesis. If persisted in, it produces free emesis. Dr. Gray also states that he has used the remedy with benefit in two cases of humoral asthma.

The Sunflower (*Helianthus annuus*), is again the study of the physician, as it has been the toy of the æsthete. Its medicinal properties are not to be despised, says the *Medical Record*. It is an anti-periodic and counter-irritant of the best kind. In malarious districts an abundance of sunflowers notably abates miasms. Thus old facts are coming forward again. The *Record* recites the fact that a district in Belgium was said to have been made quite healthy by the growth of this "now supreme form of vegetation." But the sunflower is no new thing. There are enough of them in Virginia, if there is all the virtue claimed against malaria in them, to cut down doctor's bills to nothing in many sections of the State.

Insanity in the United States.—In the April (1882) number of *Journal of Nervous and Mental Diseases*, Dr. C. L. Dana states the number of insane in this country at about 90,000, or one insane to every 570 of the population. The proportion of insane to population is greater in the New England and less in the Southern States than elsewhere. In New England the ratio is one to 357; in the Southern States, one to 780. The private and public hospital capacity for these

unfortunates does not supply accommodations for 35,000. The annual cost per patient has been estimated at from \$166 to \$316.

To Hasten the Action of Quinine.—Dr. Starke, in *Berliner Klin. Wochenschrift*, advises that before swallowing powder or pills of quinine, a weak tartaric acid lemonade be taken. This procedure not only greatly accelerates the solution and absorption of the quinine, rendering its physiological action much more prompt, but also obviates that unpleasant gastric irritation so common after the administration of large doses of this drug.

Injections of Hot Water in Dysentery.—Dr. John G. Earish gives in the *College and Clinical Record* the history of three cases of dysentery, in all of which copious injections of hot water resulted in almost instantaneous amelioration of all the distressing symptoms and a speedy cure.—*New England Medical Monthly*.

Lobelia Poisoning—A Curious Cause of Death.—A man of intemperate habits in England took a powder containing lobelia, capsicum, etc., by advice of an irregular practitioner. He died without vomiting. At the autopsy there was found a rent in the stomach, through which the contents had escaped into the peritoneal cavity. In a stomach weakened by disease, an emetic like lobelia may, therefore, produce a fatal rupture.—*Drug News*, August 18, 1882.

Wound of the Left Lung.—Dr. L. E. Holmes (*London Lancet*, February 19, 1882,) reports the case of a man, aged thirty-one, who was standing at the bottom of a shaft, two hundred and twenty-five feet deep, when he was struck between the superior angle of the left scapula and the spine by a drill, thirty-seven inches long, one and one-quarter in diameter, and weighing eight and one-half pounds, which fell from the top. The drill entered two inches from the spine, passing downward and forward, emerged on a line with the left nipple, six inches from the sternum. It made a wound nearly eight and one-half inches in length. The patient, aided by another man, withdrew the drill, the head of which was much battered, and must have torn the lung and flesh very much in passing through. The patient was brought to a hospital, where he remained eight weeks; then finding himself strong enough, he went to his boarding-house. The

two openings began to discharge offensive pus four or five days after admission, and were at first treated with carbolic acid injections (ten grains to the ounce). These, becoming disagreeable to the patient, were discontinued. The lung was shrunken to two-thirds its usual size. The patient is otherwise as well as ever. There was not during the case any marked pleurisy nor any great amount of fever. The case is in many respects exceptional.—*California Med. Journal*, April 1882.

Spiræa Ulmaria.—Dr. J. Baugh, of Hamilton, Canada, reports the uses of this comparatively new remedy, which has been too much overlooked by the profession. He says, in the *Canada Lancet*, August 1882: The use of this drug in the treatment of senile enlargement of the prostate gland has, in three cases, given me wonderful results. About ten months ago I was called to see T. B., æt 68, in the city of London, and found him suffering from retention of urine. I had him put immediately into a hot hip-bath, the hot water coming well over the pubes, and administered a drachm of paregoric and twenty drops of Hoffman's anodyne every thirty minutes. He remained in the bath about fifteen minutes, when hot wet cloths were applied over the bladder. Nearly two hours elapsed before this method of treatment had the desired effect. After the bladder had been evacuated, I found on examination per anum, hypertrophy of the prostate. I then explored the urethra with a number 10 catheter, found no obstruction and the instrument glided into the bladder without difficulty. Two weeks subsequently to this attack, I was called again to the same patient. I tried my former method of treatment, but it failed. I also failed to introduce the catheter. Matters were becoming alarming, and I was about to send for professional assistance, when it came from another source, viz., an old woman. She volunteered the information that the patient wanted a dose of Queen of the Meadow (the common name for spiræa ulmaria) and that if he got it, it would cure him in quick time. She said some could be procured in a few minutes. I asked her to get it. It was brought, an infusion was made and half-a-pint given to the patient, and in fifteen minutes he desired to micturate and emptied his bladder without difficulty. Since that time the patient has needed no medical or surgical aid to rid him of his old enemy. If he gets on a spree and his old trouble threatens him, he takes Queen of the Meadow tea and rejoices in being saved. In two

other cases of this nature in which I used this drug, the results were just as satisfactory. I have tried it on myself in health and find it acts as a diuretic and astringent, since it sometimes causes smarting pain as the urine passes along the urethra. Its antispasmodic properties are very marked at the sphincter vesicæ, and I think much of its virtue in the affection named results from its power to overcome the contraction of the neck of the bladder arising from irritation in the prostatic region. It is my opinion that, in many cases of retention of urine from prostatic enlargement, the enlargement is not, *per se*, the main obstacle, but rather the spasmodic contraction of the sphincter vesicæ, as the result of sudden congestion or inflammation of the prostate gland. In conclusion, I would ask for this drug a fair trial by the profession.

Prevention of Blindness.—That blindness and deafness are becoming more common among the youth of the country are facts no longer doubted. The habit of early smoking, especially the “cigarette practice,” is an evil scarcely less dangerous than that of opium. Certainly it is established that the effect of tobacco is a poison upon immature organism, as the *Medical Record* (August 19, 1882,) justly remarks. But our purpose now is more directly addressed to the re-statement of facts recently contained in the journal named in regard to the prevention of blindness. The *Record* says, substantially, that sanitarians have given little care to the *prevention* of blindness, although the general subject of the hygiene of the eyes has been often discussed. A society has been recently formed in London for the purpose of preventing blindness and ameliorating the condition of those suffering from it. There is one person in 1,000 blind in England—31,000 in all. Of these it is believed that at least two-thirds might have preserved their eye-sight if proper care had been given it during infancy or later. The cost of supporting these 31,000 is about \$1,500,000 annually. To this must be added the loss of the productive work which these persons might have done. The loss of the work of 31,000 laborers or producers is a matter for the economist to consider. The London Society at once offered a prize for the best essay upon the means of preventing blindness. [No report of any essay is made.] It has also attempted to instruct parents regarding dangers to the eye-sight which their children incur. Thousands of tracts to mothers, describing means for preventing ophthalmia, neonatorum, etc., have

been circulated. The Hygienic Congress, which meets at Geneva at an early day, will consider the subject, and further measures will be adopted for carrying out the purposes of the Society.

Book Notices, &c.

Treatise on the Physiological and Therapeutic Action of the Sulphate of Quinia. By OTIS FREDERICK MANSON, M. D., Professor of Physiology and Pathology in the Medical College of Virginia, etc. Philadelphia. J. B. Lippincott & Co. 1882. 12mo. Pp. 164. Price, \$1. (For sale by Messrs. West, Johnston & Co., Richmond.)

There is no man in this country with whose reputation as a student and as an observer we are acquainted that has a higher claim to authorship on the subject named in the title of this book than Dr. Manson. His personal experience of over twenty years in a severely malarial section of North Carolina afforded him every opportunity to test the value of quinia in almost all the diseases for which it has been suggested; and his well selected and thoroughly read library on cinchona and its alkaloids gives him an advantage that but few possess. His idea as to the *modus operandi* of quinia, stated in general terms, is that it is a "paralysant" of the nerve centres of sensory impressibility; and carrying this theory out in explanation of its wonderful therapeutic powers, he shows how it cures many of the diseases for which it is specifically employed. We regard this monograph as the most valuable one to the general practitioner that has ever appeared on the subject from the American press. It is of special importance to Southern physicians. When the second edition comes out, an improvement would be the addition of an index and a table of contents.

An Index of Surgery. By C. B. KEETLEY, F. R. C. S., Senior Assistant Surgeon to the West London Hospital; Surgeon to the Surgical Aid Society, etc. New York. Bermingham & Co. 1882. 8vo. Pp. 220. (From publishers.)

According to the "Preface," this book is intended as a "cramming book," for the use of students. Its true range of usefulness is, however, much more widely extended. As indicated by the title, subjects are named and discussed in regular order, according to an alphabetical arrangement of the names of the respective diseases, injuries and special

operations. As few words as possible are used in any of the descriptions. It will serve as a ready reference book on surgical matters. No practitioner would go wrong in adding this work to his library.

Treatise on Albuminuria. By W. HOWSHIP DICKINSON, M. D., F. R. C. P., etc. Second Edition. New York: Wm. Wood & Co. 1881. 8vo. Pp. 300. (From Publishers.)

We wish we could say all of this book that the industry of the publishers might lead us to say, if we thought that we could faithfully, to our trust, recommend it. We do not blame the publishers for sending it to the printer; but we do not think that the editor for the publishers ought to have recommended it for publication in the excellent series of "Wood's Library of Standard Medical Authors." The author says of the work, according to the "Publishers' Preface." "Important questions which have arisen since the first issue have been dealt with in the light of accumulating experience." The chromo-lithographer—if we are right in giving the party who prepared the colored drawings the proper title for his work—has well executed his part; the wood-cut prints are well made; the publishers have done their duty. Still it looks rather as if the writer had written to get a reprint of his paper or book than to impart information. His records of cases are not well reported—they are, in many important details, oftentimes obscure or lacking in the matter of detail. The author, furthermore, shows but little power in the analyses of his own reported facts.

But with all of this adverse criticism, there are some points worth remembering in regard to the *arrangement* of this *Treatise*. For instance, in Chapter IV, relating to the "clinical history of tubal and diffuse nephritis," we notice that the author first considers the "subjects" of these troubles, which practically bear on the matter of recognition of troubles of the kind referred to. Then, as in other perfect treatises, we find sections, under each chapter heading, devoted to causes, symptoms (which are, in general, well described), duration of disease, physical differential diagnosis between the two conditions named in the title of the chapter, etc. Not a word is said, in the chapter on treatment of the class of affections alluded to, of jaborandi or pilocarpin. The great special value of these agents has been known to the American profession for five or six years, and to many other doctors for years before. We, of America, are prone to think too much of that which is foreign. It is yet well-

known that no one, of a progressive nature, in business or science, can find a better field for improvement in his vocation than in this country. A "prophet is not without honor *save in his own country.*"

Many a *country* doctor of the South, even, could have written a better *exposé* of the knowledge of to-day on albuminuria, than is given in the book under consideration. It is a great mistake, in our opinion, for publishers to secure the services of *American* editors who are not American, either in their birth, education or views. What we are sadly needing are books of foreign authorship, if that is the point looked for, that are properly edited for American practitioners. Why not urge or encourage doctors of this country, who are, generally speaking, more progressive and are usually "equal to the times," to become writers of papers or books?

We do not think much of the book before us. But we do not wish to be too harsh in our criticisms of it.

Clinical Lectures on Diseases of the Urinary Organs. By SIR HENRY THOMPSON, Emeritus Professor of Clinical Surgery, and Consulting Surgeon to University College Hospital, etc. Sixth London Edition. Illustrated with 72 Wood Engravings. Philadelphia: Presley Blakiston, Son & Co. 1882. 8vo. Pp. 175. Paper. Price, 75 cents. (From Publishers.)

The day has fortunately arrived when books of the highest scientific value are purchaseable at even more than *reasonable* rates. How this book can be sold for 75 cents to leave a profit to the publishers and a "royalty" to the author, we cannot see. But so it appears to be, and we are glad that both of these parties are receiving their satisfactory rewards, and that at the same time the profession is greatly benefitted by the material information which this book gives.

Sir Henry is so distinguished as an author in the treatment of diseases of urinary organs, that the mere mention of his name as the author would insure the book a wide field of circulation. But Sir Henry has greatly improved the present edition. True, the book is made up by the stenographer of his lectures; but instead of having only six lectures as formerly, it now includes twelve lectures—each one sufficiently concise to make it easily read, while almost every line conveys some practical information. Lithotripsy is described as performed by our great American surgeon, Dr. Bigelow; but we scarcely think sufficient credit has been given him for what he has done in this special direction. People, as well as their works, should many a time live in memory.

So as to keep our readers from being misled by the title, which is perfectly correct, we ought to state that this is not a treatise on any of the venereal diseases. It relates mostly to urethral strictures, vesical calculus, etc. It is a most valuable addition to any doctor's library.

We will take the liberty of adding one remark for the benefit of publishers of paper bound books. The suggestion is this. Print the name on the *back* of the book, and not only on the first cover page. Most parties who have libraries are in the habit of arranging their books on shelves upright. It saves worry and time to have the title, in brief, at least, on the back so as to be readily recognizable as one passes his eye along a shelf. It adds but a trifle to the expense of publication, and a recognition of this suggestion would be a great accommodation to purchasers. These remarks are not intended alone for the excellent publishers of the work before us, but for many other of our most popular publishers.

Vest-Pocket Anatomist: By C. HENRI LEONARD, A. M., M. D., Professor of the Medical and Surgical Diseases of Women and Clinical Gynecology, Michigan College of Medicine, etc. Eleventh Revised Edition. Detroit: Illustrated Journal Co. 1882. 16mo. Cloth. Price, 75 cents. (From Author.)

This little book is best described by a quotation from its Preface, as follows: "While the larger portion of the book is simply 'Gray' condensed and transposed, the author has also used, quite liberally, in the preparation of the new section on *Triangles and Spaces*, Brown's *Aid to Anatomy* and Bryant's *System of Surgery*. In the gynæcological section, the works of Gray, Savage, Hirschfeld, Barnes and Playfair have all been consulted. The section, '*Points Worth Remembering*,' the author hopes will prove of use," as it will undoubtedly do. Such synoptical works are frequently of great value to practitioners who wish to refresh memory as to certain leading facts they may have occasion to use from time to time. Four editions of this book have been sold in London alone, which circumstance indicates its great popularity.

Labor among Primitive Peoples. By GEORGE J. ENGELMANN, A. M., M. D., Professor of Obstetrics in the Post-Graduate School of the Missouri Medical College, etc. Fifty-six Illustrations. St. Louis: J. H. Chambers & Co. 1882. Pp. 203. Cloth. Price, \$2. (From Publishers).

We have read this book with the intensest interest. It is

almost an exact reprint of articles which have appeared in the *Transactions of the American Gynecological Society* of 1880, to which we have heretofore alluded in kindly terms; in the *American Journal of Obstetrics* from April, 1881, to July, 1882, and that other excellent journal, the *Courrier of Medicine*, for March and May, 1882. In this volume, these several articles have been collected. The whole is a study or a full statement of the "development of the obstetric science of to-day, from the natural and instinctive customs of all races, civilized and savage, past and present." We have heard Professors of Obstetrics make many foolish remarks as to the "posture of women in labor," and in our conversations with other experienced doctors, we have found such variance of opinion in regard to this one subject—while all of them have like successes as to results—that we have often wondered, is there any *special* position for a woman to assume when she is in labor? We think not. In our private practice, we have long since learned to allow a woman in labor to lie, sit, walk about or take any other natural position she pleases, except *don't sit on a chamber pot* or the like.

We are sorry our author has not properly analyzed his own study on the very interesting subject he presents in this work, so as to fully offer conclusions at which he must have arrived after a record and review of the facts herein contained. The book is, nevertheless, eminently worthy of the careful reading of every doctor "and antiquary" throughout the world. We doubt not that it will be translated in many other languages. It deserves such a compliment.

Nurse and Mother. By WALTER COLES, M. D., Consulting Physician to St. Ann's Lying-In Asylum, St. Louis, etc. St. Louis, J. H. Chambers & Co. 1881. 8vo. Pp. 153. (From Publishers.)

It is a misfortune that so many good books of useful advice as are now being published by doctors do not secure popular sale. What the doctor says or directs, in the way of watching or of nursing, is implicitly followed by good nurses and *mothers*, who are generally the best of nurses. But what the doctor *writes* for the good of the sick is seldom noticed, unless the enterprising author gets some friendly editor of a city newspaper to copy or make full extracts from his article, claimed to be written solely for the profession. The so-called "ethics" of the profession have gone too far, in this direction, against honest doctors who, believing in the principle of "*quæ prosunt omnibus*," have yet been prevented by the "ethics" of the professional code, from publishing

their general advices in the newspapers which will reach the people. Should we, as a profession claiming for ourselves a rank next to the ministry of the gospel, wish to withhold our information from the public? The sooner we raise ourselves, as practitioners, above the level of the sordid or avaricious class of population, the more will we dignify the profession which we claim as ours, and the sooner will we have the moral influence with State and other councils to accomplish a political movement, already awakened, that of having competent parties to practice medicine and surgery—according to worthiness as attested by members of State or local boards of medical examiners.

But aside from the general considerations suggested by a reading of this book, we find a full volume in the form of a “manual for the guidance of monthly nurses and mothers, comprising instructions in regard to pregnancy and preparation for child-birth, with minute directions as to care during confinement, and for the management and feeding of infants,” which we think ought to be thoroughly considered by every doctor. This is a *very* useful book for doctors and people.

The Change of Life in Health and Disease. By EDWARD JOHN TILT, M. D., Past President of Obstetrical Society of London, etc. Fourth Edition. Philadelphia: P. Blakiston, Son & Co. 1882. 8vo. Pp. 184. Paper. Price, 75 cents. (From Publishers.)

As stated in the title page, this is a “clinical treatise on the diseases of the ganglionic nervous system incidental to women at the decline of life.” The work is systematically arranged, and discussed with a thoroughness for which Dr. Tilt has become so favorably known. The book is composed of twelve chapters, which are properly divided into three parts. Part I treats of the physiology of the change, range of ovarian power, probable and comparative dates of cessation, late parturition, etc. Part II discusses the principles of pathology, treatment at the change of life, with rules of hygiene to be observed at that time. Part III takes up special pathology—making seven chapters—devoted to the diseases of the ganglionic nervous system, diseases of brain, neuralgic affections, diseases of reproductive organs, including diseases of the kidneys and bladder, diseases of the gastro-intestinal organs, vomiting, jaundice, diarrhœa, constipation and hæmorrhoids, etc. The book is, in every particular, well-prepared and is authoritative, and a careful study of its teaching will prove highly interesting and instructive to practitioners.

Treatise on the Materia Medica and Therapeutics of the Skin.

By HENRY G. PIFFARD, A. M., M. D., Professor of Dermatology, Medical Department of the University of the City of New York, etc. New York: William Wood & Co. 1881. (For sale by Messrs. West, Johnston & Co., Richmond, Va.)

Although this book was issued over a year ago, it is as valuable as it was when first handed, in manuscript form, into the hands of the publishers. It was written by a capable author, who has done all he promised on his title-page. Under the discussion or summary description of each of the general skin diseases, he has given quite a full *resumé* of the therapeutics to be employed. In very rare instances, does he give the Materia Medica side; but he certainly does bring in the important points of Therapeutics which bear on his subject. In addition, he gives valuable formulæ under almost every heading of a chapter or disease of the skin. If there is any one hand-book merely on the recognition and treatment of dermatological diseases extant than this one, that is thoroughly practical, we have not seen it. It should be in every doctor's possession, and carefully read—as well for information as for regular reference.

Eczema and its Management. By L. DUNCAN BULKLEY, A. M., M. D., Attending Physician for Skin and Venereal Diseases at the New York Hospital, etc. New York. G. P. Putnam's Sons. 1881. 8vo. Pp. 344. (For sale by Messrs. West, Johnston & Co., Richmond, Va.)

This is the best of the several monographs on eczema that have come under our notice. Starting with the idea that this disease is the "keystone of Dermatology," the author gives a thorough description of it, as derived by an analysis of his own observations regarding it—embracing an experience of 2,500 cases. He also has made a full research of the literature of the subject. He points out that there are no less than twenty-eight skin eruptions that have been mistaken for eczema—each one of which he considers with reference to its differential diagnosis so far as eczema is concerned. The greater part of the work, however, is devoted to the management of the disease. In every particular, the advice given is practical in character and curative in effect. In the section on the hygienic treatment of the affection, prominence is given to the value of many of the Virginia mineral waters; and the special indications calling for a resort to them are pointed out. Among the Virginia Springs justly commended by the author are the Rockbridge

Alum, Bath Alum, Bedford Alum, Hot, Warm, Healing, Old Sweet, Alleghany, etc. The chapter which completes the book—Therapeutics of Eczema—is a useful one. It is filled with formulæ which have been tested.

Diseases of the Bladder and Prostate Gland. Sixth Edition. Revised by WALTER J. COULSON, F. R. C. S., Surgeon to St. Peter's Hospital for Stone, etc. New York: Wm. Wood & Co. 1881. 8vo. Pp. 393 (For sale by Messrs. West, Johnston & Co., Richmond.)

This is another of the excellent series of "Wood's Library of Standard Medical Authors." But we still think American authors are best for American practitioners; for they are close students of what is said in foreign countries, and are conversant with what is going on in this country. In this book a botched description only is given of Dr. Bigelow's method of crushing stone in the bladder, although full credit is accorded him for his eminent services. But we do not intend to injure the worth of this book by such minor criticisms; for it is really a quite thorough work, and is practical in its suggestions, both as to diagnosis and treatment. It is highly to be commended.

PAMPHLETS, REPRINTS, ETC., RECEIVED, for which we have no room for further notice; but most of which can be obtained by enclosing a letter stamp for each pamphlet to the respective authors named.

The Presence of the Micrococcus in the Blood of Malignant Measles. Its Importance in Treatment. By JOHN M. KEATING, M. D., Philadelphia, Pa. Large 8vo. Pp. 7. (Reprint from *Philadelphia Medical Times*, August 12, 1882.)

A well-prepared paper, reviewing somewhat an old subject, illustrated by concise reports of eight cases, with autopsies of several of them; and mention of eight more cases. The author says that "Experience has already taught us that alcohol, the vegetable acids, calomel or corrosive sublimate are the drugs, *per se*, in septicæmia." His study is, however, limited to one epidemic; yet the Doctor states the "conclusions which seem warranted as follows:

The *micrococcus* is found in the contents of pustules and vesicles, and also in the blood taken from the measles-papule in ordinarily mild cases, without its being present in the blood taken from the punctured finger. In severe cases, called malignant in this paper, owing to the rapid appearance of morbid symptoms, the blood shows early in the attack numerous patches of micrococcus in the field.

In cases of rapid sthenic disease with high temperature and great tissue-change, the evidences of large quantities of fibrin with a tendency to coagulation are manifest. The rapid production of micrococci soon gives the mechanical impediment, and if stasis takes place from any other obstruction to the circulation, clots rapidly form.

The non-appearance of clots in malignant fevers attended with fluid blood, such as low forms of typhus, diphtheria, etc., is simply due to the fact that rapid tissue-changes have resulted in decomposition, instead of into fibrin-forming substances—no fibrin is formed, hence no clots—but the micrococci are present all the same. These cases are held by some to be the malignant ones, but I think the *foudroyante* character of the others, just mentioned, entitles them to be placed in the same category.

But the micrococcus, if left unheeded, may attack the white corpuscle as distinctly seen under the microscope, and destroy its contents. The red cells also change in appearance, and finally probably become, to all intents and purposes, useless in the economy. When such a condition is seen by the microscope and found extensive, a fatal prognosis can be given, despite the most active treatment.

In cases where the white blood-cells are as yet unaffected, treatment, when active, will be followed by good results, provided the other complications, as visceral inflammation, etc., are not in themselves excessive.

Alcohol (whiskey in our cases) seems in some way, when given in large amounts, to check the progress of the marauders, to arrest the process of destruction, and, if needful, can be associated with quinine and iron in small repeated doses, digitalis, perhaps, and frictions, baths and poultices, etc. As we have seen, the symptoms presented are contemporary with the changes going on within the blood; they may, *in lieu* of a careful microscopic examination of the blood, be taken as a gauge for treatment; knowing what can and will take place, early active treatment will give the patient some chance for the future."

Report on Ophthalmology. Made to the Medical and Surgical Faculty of Medicine, 1882. By JULIAN J. CHISOLM, M. D., Chairman of Section, etc., Baltimore, Md. 8vo. Pp. 15. [An excellent *resumé* of recent advances in the treatment of eye troubles. The general practitioner would not only be interested by a perusal, but would be greatly profited by a thorough reading of this pamphlet.]

Editorial.

Medical College of Virginia.—The following well-considered editorial of the Richmond *Dispatch* of August 15, 1882, is justly entitled to the consideration of the medical profession. The Medical College of Virginia has a history with which the State should be in every way satisfied. The College commenced its work nearly a half a century ago. Its diploma confers no empty honor. Its alumni everywhere stand in the front ranks of the profession. Virginia presents peculiar advantages for the medical education of Southern students. Recent improvements in the College demonstrate its progressive tendencies and gives full guaranty that no like institution can present superior advantages to medical students. The *Dispatch* says:

“The aptitude of Southern men as teachers has long been recognized, and in no direction more emphatically than in medicine. As illustrative of this, the teachers that have filled the most conspicuous rôles in establishing what were the largest medical centres of the North were southern men. Professors J. K. Mitchell and Thomas D. Mutter, of Virginia; Charles D. Meigs, of Georgia, and Robley Dunglison (who, although an Englishman by birth, received his training as a lecturer at the University of Virginia), did more to carry the Jefferson Medical College of Philadelphia to the acme of its prosperity than all other influences combined. The University of Pennsylvania was never more honored nor more attractive to students than when the wit, humor, and brilliant attainments of Dr. Chapman, and the solid worth and profound erudition of Dr. Horner, both from Virginia, crowded its lecture-rooms; and to-day in New York the presence in its medical colleges and hospitals of such professors and practitioners as Marion Sims and Nott, of Alabama, Gaillard Thomas, of South Carolina, and Polk and others attests the high appreciation of the custodians of the interests of these institutions of the striking didactic power and professional skill of the Southern medical mind.

We have much of this same character of talent in Virginia and her sister Southern States, and this is being utilized to build up our medical colleges, which are in every way worthy of and should receive the patronage of our section. Every consideration endorses the wisdom of this course. We have at the University of Virginia, and at the Medical College of Virginia in this city, professors who are the peers of any.

Our colleges at the South teach the modifications of disease peculiar to our latitude—an inestimable advantage to such as propose to practice in this section—and their means of clinical instruction since the war have been most ample. Before the war these schools, although unsurpassed in theoretical teaching, yet lacked for clinical material. The laboring classes at the North managed in health to obtain subsistence, but when sick many could not pay doctors' and apothecaries' bills, and hence they peopled almshouses and hospitals, and thus furnished to medical students abundant material for illustrating the diagnosis and treatment of diseases which we then did not have. On the other hand, the laboring class with us was composed almost exclusively of slaves, and these were treated at home by the family physician of their respective owners. We had in those more prosperous days, and under our humane system of labor, no lazarettos, because we had no lazaroni to fill them. Now, by the verdict of the war, four millions of colored people, improvident, thriftless, unaccustomed to self-reliance, and therefore specially vulnerable to morbid influences, furnish occupants in plenty for almshouses and hospitals, and so out of the horror of that fratricidal strife there comes at least this one advantage, the opportunity of building up schools that have no superiors for the instruction in the art and science of medicine to students in general, and are superior to any in the advantages which they afford to such as propose to practice their profession at the South.

We are happy to learn that our students are beginning to estimate at their true value the facts herein stated, and that at no time in its history have the prospects of our Medical College of Virginia been brighter than now. We sincerely trust that such of our young men as design to devote themselves to the divine art of healing will avail themselves of the able teachings of this institution, of which we are so justly proud, and whose imprimatur is a passport to the confidence of the sick and suffering throughout our State and section. It is a matter of congratulation that we have in our midst such ample means of furnishing thoroughly-cultivated and accomplished physicians, for it is as true now as in the days of Homer that

'A wise physician, skilled our wounds to heal,
Is more than armies to the public weal.'"

The Medical Society of Virginia seems to be this year on something of a "boom," so far as the addition to its number

of Fellows is concerned. We do not recall that, during any year since 1871, has more activity been displayed on the part of the profession of the State in developing the organization than is just now being manifested. One physician alone has sent in seven applications, and another residing in a different section of the State has forwarded six with the confident promise of doing something more. Other Fellows are sending in other applications, and thus the ball is moving. Let each Fellow of the Society do what he can to add to the membership of the Society, and thus help in the perfection of the organization of the State profession. Let those of our Virginia readers who may see this notice, if not already members of the Society, fill up the following blank and return it *at once* to the Recording Secretary, Dr. Landon B. Edwards, Richmond, Va.: Name in full ———; Date and College of Graduation ———; Recommended by (some Fellow of the Society). Let each application be accompanied by the initiation fee—\$2. Upon immediate application, the full circular Announcement of the approaching session will be forwarded to any regular practitioner in the State.

In the Circular Announcement, Dr. Alex. Harris, of Jeffersonston, Culpeper county, Va., is named as Chairman of the Local Committee of Arrangements. We are advised by letter from him that this statement is not correct. We regret the error. Dr. J. W. McIlhany, of Warrenton, Va., is the Chairman, to whom all letters relating to local arrangements should be addressed.

In addition to the special rates named in the Society Announcement, the Richmond and Danville Railroad will sell "round trip tickets" from any depot on its line according to rates which have been given to ticket agents all along the route.

The place of meeting this year is one of the favorite watering places of Virginia, and the time selected for the meeting (September 13th) is not too late in the season to make the trip enjoyable. Doctors, should, therefore, as far as practicable, take their families with them. The same rates of travel and of hotel fare will be allowed members of doctors' families on this occasion as to the doctors themselves who may attend the session. Let there be a large attendance.

Journal of the American Medical Association.—The Trustees appointed during the late session of the Association to inquire into the expediency of journalizing the Transactions, have just issued the following circular:

The desire for some more speedy method of publishing and distributing the transactions of the American Medical Association than has been attained, through an annual volume, led the Association at its last meeting, to decide to journalize its proceedings, and publish them hereafter in the form of a Medical Journal, provided the members of the Association and the profession at large will insure its pecuniary success. This may be secured by the prompt payment of the annual dues of members of the Association, and of subscriptions by those not members. The journal is to be under the control of the Association, through its Trustees, and to be issued and supplied in place of its annual volume of transactions. It will be known as The Journal of the American Medical Association. The Trustees will, if they receive a sufficient number of subscriptions, feel justified in recommending to the Association the propriety of the change, and the adoption of the following plan: To issue a weekly journal, each number to contain thirty-two pages of reading matter, and which shall embrace the following departments:

I. Original Papers, Addresses, Reports, and so forth. This will include all the papers read before the Association and its sections, which are referred for publication.

II. Leading Editorials on the Scientific, Educational, Social, Sanitary, Ethical, and other interests of the profession.

III. Editorial Summary of progress in the several departments of medicine, and the collateral sciences, including reviews of new books.

IV. Notices of the proceedings of Medical and Scientific Societies throughout the country.

V. Correspondence—Domestic and Foreign.

VI. American Medical Association Intelligence.

VII. Miscellaneous Medical News.

Through the medium of such a journal, the proceedings and papers of the Association will reach the members much earlier each year, and by its frequent visits, and its large amount of additional matter of value, it will maintain a much more active interest on the part of the entire membership; while its notices of the proceedings of the several State societies will tend to bring those societies into closer relationship with the national society, and thereby greatly aid in the extension and usefulness of the social organizations of the whole profession.

The intention is to place the journal under as efficient editorial supervision as a fair salary will command. All mem-

bers of the Association who pay the annual dues (\$5.00) promptly, will by that act be subscribers, and will receive the journal as it shall be issued. To those not members of the Association, the subscription price will be \$5.00 in advance. To enable the Association to decide at its next meeting whether to make the proposed change in its publications or not, you are earnestly requested to give your pledge of support by signing the enclosed printed card, and returning it without delay to the undersigned. If the pledges of support are sufficient to justify the final adoption of the plan, the first number will probably be issued on the first of July, 1883."

The following is a list of the Trustees:—N. S. Davis, M. D., President, Chicago, Ill.; E. M. Moore, M. D., Rochester, N. Y.; J. M. Toner, M. D., Washington, D. C.; H. F. Campbell, M. D., Augusta, Ga.; J. H. Packard, M. D., Secretary, Philadelphia, Pa.; L. Connor, M. D., Detroit, Mich.; P. O. Hooper, M. D., Little Rock, Ark.; A. Garcelon, M. D., Lewiston, Me.; L. S. McMurtry, M. D., Louisville, Ky.

The following is a copy of the "enclosed card" referred to in the last paragraph of the circular:

"The undersigned hereby pledges his support to the proposed '*Journal of the American Medical Association*,' either by the prompt payment of annual dues, as a member of the Association, or by the subscription of \$5.00 per annum in advance, whenever officially notified of the commencement of its publication." Sign name and postoffice address and forward to Dr. N. S. Davis, 65 Randolph St., Chicago, Ill.

North Carolina Pharmaceutical Association.—The third annual meeting of the Association was held at Winston, Wednesday, August 9th, there being about fifty members present. Dr. J. F. Schaffner, of Salem, delivered an address of welcome, which was followed by Dr. W. C. Porter, of Greensboro.

Eleven new members were admitted, making a total now on the roll of 171. Among this number are some of the most prominent druggists in the State. The Treasurer's report shows the Association to be in a good financial condition—out of debt, with a balance of \$500 on hand.

V. O. Thompson, Chairman of Committee on Education, made a report favoring the establishment of a department of pharmacy at the University, which was adopted as the expression and desire of the Association. A diploma was

awarded Horne & Williams, of Fayetteville, for best production of pharmaceutical preparations.

The members inspected the fine display of druggists' goods, consisting of pharmaceutical preparations, toilet articles, druggists' sundries, etc., which was made by several Northern manufacturers and importers. These goods were highly recommended by the Association.

Wilmington was selected as the next place of meeting. The following officers were elected for the ensuing year: *President*—Wm. Simpson, of Raleigh; *Vice-Presidents*—E. H. Meadows, of Newbern; V. O. Thompson, of Winston, and T. C. Smith, of Charlotte; *Secretary*—J. C. Munds, of Wilmington; *Treasurer*—A. S. Lee, of Raleigh; *Local Secretary*—J. Harding, of Wilmington; *Executive Committee*—A. S. Mace, of Newbern; E. M. Nodal, of Wilson; N. R. Tunstall, of Statesville; H. R. Honore, of Fayetteville; J. P. Stedman, of Raleigh, and Watt Martin, of Winston; *Delegates to American Pharmaceutical Association*—E. V. Zoeller, T. C. Smith, William Simpson, J. G. N. Cordon and A. S. Lee.

American Public Health Association.—We have received from Mr. Azel Ames, Jr., Secretary, the Annual Announcement, dated August 10, 1882, in regard to the proposed meeting of this excellent organization. Every section of the country should be interested in the deliberations of this body, and especially should the profession and laity of the South and Southwest disclose a greater concern in its deliberations. Dr. Ames will supply Announcements and give other information to all who may apply. The Association and its management is not delegated entirely to physicians. The Association will hold its Tenth Annual Session at Indianapolis, Ind., commencing Tuesday, October 17, 1882, and ending Friday, October 20, 1882. Papers will be presented on the different action of disease in the White and Black Races, The Removal of Excreta, Heredity, Sanitary Associations, Vaccination, Intermittent Fever in New England, Sanitary Organization, Cattle Disease, etc., with Reports of Committees on the Prevention of Venereal Disease, Compulsory Vaccination, the Management of Epidemics, Statistics, Cattle Diseases, National Museum of Hygiene, Incorporation of the Association, and Necrology. Terse, strong, practical papers on sanitary subjects are invited, and more time will be devoted to discussion than has been allotted at former meetings.

The Davis Invalid Bed.—This invention of a Richmond man has already received the highest endorsements from many of the most excellent physicians of this and other States. It is simple, cheap and complete, and must prove of great value in the sick-room, in private homes and in hospitals. It meets a want that will not be overlooked.

Dr. J. Marion Sims.—It will be seen from the following extract taken from *Galigani's Messenger* (Paris), August 7th, 1882, that this distinguished American has again been honored by the French Government:

“Dr. J. Marion Sims, who was made a Chevalier of the Legion of Honour in 1864, as a reward for scientific merit, has by decree of the 13th July last been made Officer of the Legion of Honour for services rendered as surgeon-in-chief of the Anglo-American Ambulance at the Battle of Sedan. The public recognition of his merits by the French Government will be hailed with great satisfaction by his friends and compatriots.”

Dr. H. J. Bigelow.—Among the prizes awarded by the French Academy of Medicine at its last annual meeting, one of 10,000 francs, which is only awarded every six years, was divided between Dr. H. J. Bigelow, of Boston, and M. Th. Auger.—*Boston Med. and Surg. Jour.*, August 24.

Langenbeck's Successor.—The chair in the Berlin University lately held by Langenbeck has not yet been filled. Bilroth and Volkmann have declined the chair. It remains to be seen (*Louisville Med. News*, Aug. 26) whether Bergmann will accept the honor. Either fat professorships are plentiful in Germany, or the rising surgeons of that country distrust their ability to fill a place to which Langenbeck's brilliant achievements and great name have given such prominence.

The Virginia State Agricultural Society will hold its Twenty-Second Exhibition at the Fair Grounds, near this city, October 25–27, next. A Supplement to the *Southern Planter* (September) gives a schedule of premiums and other information of an interesting character to exhibitors and visitors.

Cremation of Anatomical Subjects.—The Municipality of Paris has just decided, on the advice of Dr. Bourneville, to sanction the cremation of those bodies which have served

the purposes of subjects at the School of Practical Anatomy and at Clamart. The total number of such subjects received during the three years ending 1880 at both the above institutions, amounted to 10,144.—*Cin. Lan. and Clin.*, August 26, 1882.

Blue Spectacles for the Army.—The British Government has ordered 25,000 blue spectacles or “goggles” for the use of the army in Egypt.—*Cin. Lan. and Clin.*, Aug. 26, 1882.

[The green goggles were used by prisoners of war at Point Lookout, Md., in 1862-5 with great advantage.]

Caution to Physicians.—The *Lancet* tells the old story of a practitioner who failed to protect himself during a surgical operation on a female, by the presence of a third party, and was obliged in consequence to stand a trial for rape, which fortunately was followed by acquittal.—*Boston Med. and Surg. Jour.* [We would add that under *all* circumstances in administering an anæsthetic to a female the physician should have the presence of a third party.]

Walsh's Retrospect.—This valuable quarterly will not be issued again until January of next year. Dr. Walsh's engagement as director of the National Vaccine Establishment renders, imperative the temporary suspension of the *Retrospect*.

The American Pharmaceutical Association will meet at Niagara Falls, September 12th, 1882. A most excellent programme has been arranged. Headquarters will be at the Cataract House. All letters of inquiry as to routes, rates, and other details, addressed to Mr. Thomas J. Macmahan, 142 Sixth Avenue, New York city, will receive prompt attention.

The Arkansas Insane Asylum.—This new Asylum, says the *Medical News*, of August 12, will be ready for the admission of patients in January, 1883.

Messrs. Codman & Shurtleff.—As surgical and dental instrument makers, this firm has no superior in this country. We have had frequent occasions to use their manufactures, and to commend them to others. Their work is done by skilled artisans, with most perfect machinery, all directed by enterprising and conscientious proprietors. We can, especially,

commend their hypodermic syringes, clinical thermometers, and pneumatic aspirators—essentials to the outfit of a practitioner. The fact that an instrument is made by Messrs. Codman & Shurtleff is the *imprimatur* of its excellence.

The National Board of Health has established corps of inspectors whose stations extend from Boston to St. Louis. The duty of these inspectors is to examine immigrants, and search out the diseases which may exist among them, or to which they may be exposed. From last reports it appears that they have inspected thirty-five thousand immigrants, and vaccinated six thousand persons. They are doing a good work in stamping out this most terrible of all diseases, and should be sustained. Congress has reduced the appropriation so as to make it probable that this corps will be dismissed. This will be a misfortune, and has been done by the influence of the steamship companies and the New York Custom House. The peculiar interest of these parties are adverse to securing inspection elsewhere, and Congress has been made to feel its potency.—*Pittsburg Medical Journal*, August, 1882.

Chrysophanic Acid for Ringworm.—A writer in the *British Med. Journal*, says the *Canada Med. Record*, July, 1882, has tried with success the treatment of ringworm with chrysophanic acid, in the proportion of one drachm to one ounce of vaseline. The result has been the rapid destruction of the fungus, and consequently a complete cure.

The Red Cross.—Congress has appropriated \$1,000 for publishing a history of, and all necessary information concerning, the Society of the Red Cross, the United States having recently joined the Geneva Convention, and a National Society having been established [at Washington, D. C.] with Miss Barton as the President.—*Boston Med. and Surg. Jour.*

Dr. W. R. Winchester, formerly of Leesburg, Va., has recently located in Macon, Ga. We can, without reserve, commend him to the profession and the public of the Empire State of the South.

Roosevelt Hospital.—This hospital of New York, has made a new departure in placing a single surgeon, Dr. Sands, as the sole attending surgeon for a period of one year. Dr. Sands will be aided by an assistant to be appointed by the

Board of Directors of the Hospital. • The object to be attained is to secure a continuous surgical service. Heretofore the custom has been, at the Roosevelt and other hospitals, to *rotate* the medical and surgical services, each physician or surgeon being on duty for two or three months. Dr. Seguin, of the *Archives of Medicine* (August, 1882), very properly objects to the old system, yet does not fully accord with the plan of placing a single surgeon at the head of such an institution.

Dr. W. T. Sawyer, of Whistler, Ala., is an ex-president of the Mobile Medical Association, not of the Medical Association of Alabama, as we lately stated.

The American Pharmaceutical Association will meet in Thirtieth Annual Session at Niagara Falls on September 12, and continue in session for four or five days. An unusually large attendance is expected.

Trained Attendants and Accidents.—Dr. E. C. Vidal, in a letter from Berlin to the *Monthly Rev. of Med. and Phar.*, August, 1882, says: Prof. Esmareck, the well-known surgeon of Kiel, recognizing the advantages of immediate attendance in cases of accidents, has instituted a number of schools in that city which are called Samaritan schools. They are composed of youth of both sexes who are so instructed that in case of accidents, they can render every assistance necessary until the arrival of the physician. Prof. Esmareck has written a small work upon the subject in which he exposes the various means to be employed under such circumstances. The scholars are instructed upon the formation of the bones and action of medicines in five to eight hours. In consequence of the success which has attended these schools, the Professor has visited Berlin for the purpose of introducing the system here. Eight schools, of forty students each, have been established in this city. Many of the most prominent physicians lecture and give demonstrations upon the structure of the human body. An important feature of this innovation is the enrollment of a portion of the police force among the scholars. This latter feature might with advantage be adopted by us, as it would enable our own guardians of the peace to differentiate between a case of illness and one of intoxication, which knowledge would protect the sick man from collision with the baton, or confinement in "a dungeon cell."

Obituary Record.

Wm. H. Mussey, M. D., Professor of Surgery in Miami Medical College, died at Cincinnati, Ohio, of apoplexy, on August 1st, in the sixty-sixth year of his age. He was born in New Hampshire, and received his academic education in that State. He graduated in medicine in 1843 from the Ohio Medical College. He occupied during the civil war important and responsible positions in the medical department of the government. He founded the "Mussey Medical and Scientific Library," in the Public Library of Cincinnati, contributing thereto 5,000 volumes, and 2,500 pamphlets.

Dr. Abram S. Heaton, Professor of Clinical Medicine in the Detroit Medical College, died in Detroit, July 9th, 1882, in the fifty-fourth year of his age and the thirty-third of his practice. The *Detroit Clinic* (August 9, 1882) pays a high tribute to the memory of this excellent gentleman and distinguished physician. Dr. Heaton was born in Loudoun county, Va., October 17, 1828, and graduated at Pennsylvania University in April, 1850. His father, Jonathan Heaton, who was a doctor, graduated at the same college. His grandfather, James Heaton, was also a doctor, but graduated with his preceptor, as was the manner then in this country (1786).

The grandfather's certificate of qualification is very interesting and suggestive of the condition of the times, and we publish it:

These may certify whom it may concern, that the Bearer hereof, James Heaton, from Loudoun County, Virginia, hath faithfully served me as an Apprentice in the Practice of Phisick above three Years, during which Term he hath conducted himself with the strictest Temperance Sobriety. And by indefatigable Industry hath acquired an extensive Share of the necessary skill in his Profession. He hath been entrusted during the latter Part of his Time in the chiefest Charge of visiting Patients, and prescribing in their Cases in a large Practice of Medicine, and from his Success, that may under the Blessing of God be attributed to his intense Assiduity and faithful Discharge of the Duties of his Profession, hath given a very general Satisfaction in those parts; And thence merits our Recommendation, and is hereby recommended to the public Trust and encouragement of his

Countrymen in his Physical Capacity here, or wherever he may choose to reside.

JONATHAN INGHAM, Junior.

BUCKS COUNTY, STATE OF PENNSYLVANIA,

May 10th, 1786.

Of the same Place, We, the Subscribers, have known Dr. James Heaton during his Residence in those Parts, account him worthy of the above Recommendation.

ALEXANDER CLARK, Practitioner of Physick.

[Also signed by thirty other inhabitants of New Jersey and Pennsylvania; among the latter appears the name of Captain Zebulon Pike, father of the discoverer of Pike's Peak, Colorado.]

The certificate is written on the first page of a four page sheet of coarse, heavy paper, whose pages are 15x10½ inches in size, and has been handed from father to son, till now it is in possession of Mr. James S. Heaton, only son of the subject of this sketch, who has broken the doctor succession by lately graduating in law.

Dr. George B. Winston died at Jefferson City, Mo., in July last. Dr. Winston was born in Kentucky, June 9, 1882, and graduated in medicine at the McDowell Medical College in 1846. He served as lieutenant and surgeon in the Mexican war. The *St. Louis Courier of Medicine* (August, 1882) says of him that he was "a most diligent student; he was never satisfied with what he attained, but was always eager to learn all that was new." In 1855 he was on the train that went through the Gasconade bridge. He was severely wounded. When found by physicians, he was sewing up his own wounds; and when Dr. McDowell asked to assist him, he replied: "Go where you may save a life; my wound is not fatal." Sir Philip Sidney was not a greater hero.

Dr. Francis Atwood, late on the editorial staff of the *Northwestern Lancet*, died at St. Paul, August 7th, 1882. The *Lancet* of August 15th contains a high tribute to the memory of Dr. Atwood, who was born near Boston, Mass., August 20, 1846. He took the degree of Bachelor of Arts at Harvard in 1869, and the degree of Doctor of Medicine from the same college in 1873. After further prosecuting his studies in this country and in Europe, he located in St. Paul in 1876, and there rose to great eminence in his profession. At the time of his death he was Professor of Diseases of the Eye and Ear in the Minnesota College Hospital.

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Original Communications.

ART. I.—Some of the Difficulties in the Diagnosis and Treatment of Syphilis. By L. DUNCAN BULKLEY, A. M., M. D., Attending Physician for Skin and Venereal Diseases at the New York Hospital, Out-Patient Department; Dermatologist to the Hospital for Ruptured and Crippled; Late Physician to the Skin Department, Demilt Dispensary, New York, etc.

Theoretically considered, syphilis is a simple disease caused by a definite poison, always the same, over which a definite remedy, mercury, has been found to exercise a controlling power. But practically, syphilis, or its manifestations, often presents to the general practitioner no little difficulty, both in the way of diagnosis and treatment, and may, at times, even give trouble to those well acquainted with the disease and its phases. It has occurred to me, therefore, that a few practical observations drawn from experience might not be without value and interest, for cases are continually met with where the diagnosis has been more than doubtful, or where the treatment has been far from successful.

First. It may be premised that syphilis is not as prevalent as is imagined by many. In statistics drawn from a considerable number of cases of miscellaneous skin diseases, we

find that the eruptions caused by syphilis form but comparatively a small proportion; thus in both private and public dermatological practice only about one-tenth to one-eighth of all cases are thus caused. It may possibly be thought that this is not necessarily an indication of the relative frequency of the disease; but when we remember that a large share of cases of syphilis exhibit cutaneous manifestations at some period during their course, and, moreover, that the same patients often return again and again, perhaps at distant periods, with new developments, and thus the same cases may be entered several times in hospital and dispensary records, we may readily understand that the true frequency of the disease is exhibited by statistics from dermatological practice better than by those taken from any other branch of medicine. It would be hardly safe to draw deductions from any venereal clinic alone, for the reason that, during the period in which the primary sore would be under observation, an absolutely accurate diagnosis could not be made in every case, and these patients would not necessarily return for corroboration if skin symptoms appeared. From the mistaken idea in regard to the great prevalence of syphilis, it has therefore occurred to me more frequently to see patients whose skin lesions had been wrongly called, or supposed to be syphilitic, than those in whom the contrary had happened.

The first general practical point to be borne in mind in connection with our subject, is that all patients who have had venereal sores, or who give the history of having had venereal sores, are not necessarily syphilitic. If we take a large number of patients who have, or who are said to have had, venereal sores, and study them, we will find that but a small proportion of them have really had the primary lesion of syphilis; the rest of the cases being made up of chancre, herpes preputialis, balanitis, etc. It is, therefore, never safe to argue from the statements of patients in regard to the existence of previous lesions supposed to be of venereal origin, much less is it safe ever to accept the diagnosis of patients, who, conscious of having been exposed, are ever in fear that the eruption present is caused by their sin.

The next point of practical importance which I wish to impress is this: that even if a person has had syphilis, and has even exhibited its lesions on the skin, all subsequent eruptions on that individual are not necessarily due to syphilis. There is no reason why the person once syphilitic may not thereafter become the subject of eczema, acne, urticaria, a parasitic eruption, or even of true lupus and cancer. Indeed, not at all infrequently have I seen persons who were subjects not only of syphilis, but also of at least two or three other distinct skin affections.

A third point of importance to be remembered in connection with our subject is, that it is not by any means necessary that the time of existence and location of the previous initial lesion or chancre be definitely and satisfactorily determined in order to establish the syphilitic nature of any particular eruption. While it is acknowledged that the primary sore is a necessary precedent of syphilis, it must yet be granted that in many instances, especially in women, it is a practical impossibility to demonstrate its existence, and reliance must be placed upon the character of the eruption alone; in women particularly, many of the features belonging to the progress of a typical case of syphilis may be absent.

In regard to the possibility of the occurrence of a syphilitic eruption in persons of unblemished purity, or who assuredly could never have been exposed by venereal contact, we must ever bear in mind that the non-venereal origin of very many cases of syphilis has been proven beyond any doubt; of course, the number of these cases compared to that of those acquired in the ordinary way is infinitely small. But every one who sees much of skin or venereal practice will from time to time observe cases where the disease is found in the purest virgins, or is even acquired by children, as also by others, in ways which have no connection whatever with venereal associations. The conveyance of syphilis by means of instruments, utensils, etc., as also by direct contact in handling affected parts, and kissing, likewise in the operations of vaccination, circumcision and tattooing, has been abundantly established by many observers, and argu-

ments in regard to the impossibility of syphilis having been acquired should have but little weight when the lesions present are unmistakably syphilitic.

It will be seen, therefore, that the greatest reliance must be placed on the actual character of the eruption present, and habitual clinical study has so far developed the characters belonging to syphilitic lesions, that with great care it is quite possible to make an assured diagnosis from them alone in a very large share of cases.

While, however, in the preceding remarks, it has been shown that the general history of syphilitics is not wholly trustworthy in every case, still it is by no means intended to intimate that it should be disregarded; as under many circumstances it may become of the highest corroborative value. The date of evolution of the various skin and other symptoms of syphilis is of more or less value in connection with every case; the superficial lesions and functional disturbances occur early in the disease, while deeper structural changes belong to later stages. In a case about to be detailed, the occurrence of tubercles, and what afterwards turned out to be lupus, about one year after the supposed infection, could hardly have been mistaken for the development of syphilitic manifestations if due regard had been had to the chronology of the disease; such a lesion would belong to a much later period.

Not long ago Mr. Jonathan Hutchinson wrote upon the subject of "Syphilis as an Imitator," and perhaps the tendency of syphilis to take on various forms and become confounded with other diseases could not be expressed in fewer words or better, than in the title of the paper referred to. Not only in its skin symptoms, but in most of its other manifestations, syphilis may at times indicate a vast number of affections with which it has no connection whatever. It is not always safe, therefore, to take even the history of a genital sore, in preceding eruptions, nor that of sore throats, of alopecia, of bony affections, etc., unless the totality of pathological signs confirms the diagnosis. Indeed, it may even happen that the evidence is exceedingly strong and yet the actual lesion present has no relation to syphilis. This can

not be better illustrated than by the following case in brief:

Mrs. —, aged 44, a lady of refinement, consulted me May 11th, 1875, for an eruption affecting principally the left ear, cheek, and side of the nose, with a little eruption upon the right ear. This had existed nearly twelve years, increasing slowly, and she was exceedingly distressed about it, because it had always been considered to be syphilitic by a number of physicians, some of them of great prominence and authority in matters pertaining to skin and syphilis. She gave, indeed, many symptoms which had been, and could readily be, construed towards this diagnosis. Two and a half months after the birth of her last child, twelve years previously, she had neuralgia of the right side of the head, neck and right eye, with an accompanying iritis, and, as her husband had acknowledged to a single indiscretion just before the last child was born, the diagnosis of syphilis was then first established. Later she was said to have had sore throat, and four months after the eye inflamed she began to have rheumatism. The eruption began upon the forehead and upon the middle of the right cheek one year after the time of the appearance of the iritis, or sixteen months after the child was born. With the appearance of each symptom the diagnosis was strengthened and she was thoroughly treated for this disease, having been salivated four times, and having taken, off and on, mercury and iodide of potassium, the latter very freely, for many months previous to the time of my first seeing her. On close investigation of the case it was found that the eruption had never yielded at all to specific treatment, and that it presented very characteristic lesions of lupus vulgaris. To confirm my diagnosis, as well as to relieve the mind of the patient, who was terribly distressed, as she had always been told previously that the disease was syphilis, I invited a friend to see her with me, who spent much time in Vienna, and who was well acquainted with lupus as well as syphilis. There was no question whatever in our minds that the disease was, and had been, a lupus, as the subsequent history has abundantly proved.

Careful analysis, then, of her preceding history, showed her to be a strumous subject, a twin having died of consumption. The neuralgia had occurred while nursing, shortly after her confinement, and had a direct cause in severe wetting and exposure to cold. The right eye became inflamed shortly after another exposure out doors, the snow being on the ground and the sun dazzling bright. The

rheumatism which followed four months after the inflammation of the eye, gave the history of ordinary inflammatory rheumatism in the right knee and in the ankles, also in the hands, of which she has had three attacks, being in bed five months with it one year after its first appearance. When first seen there were still remains of chronic rheumatism about some of the joints. Her sore throat appears to have been non-specific, from ordinary causes. Although very closely questioned, it was found that she had never had any sores about the genitals, never any swellings of the glands in the groins or elsewhere and her husband's trouble was but a slight abrasion of the penis, which healed in a day or two with black wash. He had no buboes, and never any eruption or other lesion of syphilis. The patient had never had any general macular or papular eruption, or any but the one which then existed, except what appeared to be possibly a little iodide of potassium acne upon the face. Dating back her lupus eleven years from the time of her first visit, I found that it occurred at the age of 33, a not uncommon period for its development, especially after the exhausting condition through which she had passed.

We see from this that great care must be taken in weighing the symptoms presented in any particular case before they can be definitely established to be syphilitic; undoubtedly as corroborative they are of value, but care must be taken that all the links of the chain of evidence are perfect as far as possible. In a large share of cases, however, the greatest reliance must be placed upon the actual characters presented by the eruption itself.

The subject of the diagnosis of syphilis is such a vast one, reaching into and involving possibilities in regard to every organ of the body, that it would be entirely impossible, within the compass of the present paper, to allude to more than one branch of the subject. I will, therefore, confine my remarks entirely to the matter of the external manifestations of the disease, except as far as other items may be incidentally considered.

I will not attempt to enter fully into the subject of the initial lesion of syphilis, other than to recall the well-known features which characterize it; these are its rather protracted period of incubation as distinguished from the early appearance of the chancre; the non-destructive character of the

former as compared with the eating nature of the latter; the scanty serous secretion of the initial lesion of syphilis in place of the copious purulent secretion of the chancre; the sloping edges of the former and the small amount of superficial ulceration, seated upon a greater or less amount of induration, compared with the sharply cut or undermined chancreoid sore, with no induration in, under, or around it; and the separate, non-inflamed, indolent, indurated glands in one or both groins, found in connection with the syphilitic sore, as compared with the inflamed, painful mass, often suppurating, belonging to the chancreoid. It must be acknowledged, however, that occasionally one or many of the signs which characterize these lesions are very frequently wanting, and that doubtful cases do continually occur in which it is impossible at once to pronounce upon the syphilitic or non-syphilitic nature of the venereal sore.

A possible cause of mistake in regard to an early erythematous eruption of syphilis might occur from the presence not only of an ordinary skin lesion, as measles, urticaria, erythematous eczema, etc., but might also arise from the eruption caused by taking copaiba. I have seen several instances in which patients, who had venereal disease, which turned out to be gonorrhœa, have had a general eruption develop which they and their physicians supposed was connected with the venereal disease, but which was simply the result of the copaiba which they were taking for the urethral discharges. The copaiba rash resembles quite closely the erythematous syphiloderm, but as a rule is far more marked, more elevated, attacks the extremities more abundantly than the trunk, and perhaps appears more suddenly than does the eruption due to syphilis. There is also a general itching, which is sometimes very great.

The papular syphiloderm will sometimes be very difficult of diagnosis, not so much when it presents smaller, acute papules, as when the larger, flat papules are found which dry and scale upon the surface, and resemble psoriasis very closely. Occasionally it will happen that a patient who has had psoriasis, perhaps for many years, will acquire syphilis; we may have then existing at the same time, both the lesions

of the former disease, and those of that more recently acquired. Of this I have seen two or three marked examples of which the following is very striking :

Mr. —, aged 28, was sent to me in consultation February 26th, 1880, because of what was thought to be a very great aggravation of his former eruption. The following history was then obtained : Four years previously an eruption had begun at the elbows and had spread over the arms, legs and scalp, disappearing the first summer and returning in the fall. The next year he had the same eruption very lightly, and the succeeding fall it returned still more severely, covering most of the body, and again vanished in the summer. Four months ago the same old eruption appeared, for which he again took arsenic, under which it disappeared. Two months ago the eruption again appeared, as of old, but five or six weeks later he noticed that the character of the eruption had changed, and he called his physician's attention to the change; the latter, however, did not recognize any difference, and he was again put on treatment for his psoriasis.

He was a very intelligent patient, and in his description of the former eruption he stated that the patches were larger, less elevated, more scaly, and the scales were more bran-like than in the present eruption. He also himself noticed that some of the spots of his old psoriasis became thicker and changed in character, with less of the branny scales and with thicker crusts. I then elicited the fact that nearly two months previous to the visit he had had a chancre at the root of the penis, and he still exhibited inguinal adenopathy, also considerable induration of the cervical and epitrochlear glands. He had much malaise, the pulse was 96, temperature beneath the tongue 100.8°. There were also found mucous patches upon the palate, and a small one beneath the tongue, on the left side. The eruption exhibited most remarkably the characters of the two diseases. In certain localities, as upon the extensor surfaces of the arms and legs, ordinary psoriasis was visible with its micaceous scales; and also the same eruption was more or less scattered over the body, neck and face. But between these lesions, and often combined with them, were others, composed of patches of various sizes, some of them half an inch in diameter, of a darker red, more elevated and succulent looking, with a slight amount of yellowish, more adherent scales. This eruption was scattered over much of the body, being most developed upon the face and neck, and was accompanied by some degree of analgesia.

In this case the marked change which came over the old eruption of psoriasis was quite sufficient to establish the diagnosis, and should certainly have excited suspicion, and a very careful examination should have shown that quite another disease had appeared. The reason for the very early occurrence of this large scaly form of the syphilitic eruption was probably the psoriatic habit or condition of the patient.

The lesions of syphilis which usually give the greatest difficulty in diagnosis are those occurring late in the disease, or such as are more commonly known as the late secondary, or tertiary symptoms, and many of these cases often go for a long time without the correct diagnosis being established. The reason for this lies, oftentimes, in the well-known, isolated character of the eruption, that is, its occurrence frequently without any concomitant signs of disease, and often in apparently healthy individuals, and also in the fact that many of these cases fail to present a history, which is at all satisfactory, of previous stages of the disease. It may almost be said that cases which present these late lesions are such as very frequently have exhibited very few of the anterior manifestations of the poison. Especially in females will it happen that careful questioning will fail to elicit the history of preceding eruptions, or of any disorders which can be recognized as definitely syphilitic. The reason of this tendency in females to skip or pass lightly over the earlier stages or phenomena of syphilis has never been satisfactorily explained, but such is the fact, and it often adds very greatly to the difficulty of diagnosis. These late lesions of the skin in syphilis take the form of what is known as tubercular or gummy deposits, and oftentimes resemble quite closely lupus and epithelioma; and further, as the tendency of these late deposits in syphilis is to attack the face, a favorite seat also of lupus and epithelioma, the diagnosis is often very difficult between them. Such cases as the following exhibit the difficulties which sometimes arise in this way:

Mrs. F——, aged 38, was sent to me April 13, 1876, for consultation with regard to an eruption occupying the end of the nose and upper lip. It was composed of a mass of deep red or purplish lumps or tubercles of various sizes, with

an elevation of half a line or one line; some of them had crusts upon the surface, others only a moderate scaling. The left wing of the nose was especially involved, the edges being greatly thickened and somewhat cracked. About the middle of the right side of the nose was an isolated tubercular mass; adjoining this eruption were one or two smoothe, white cicatrices, the result of former burnings with caustics by her physician, who had always regarded the disease as lupus. The eruption dated about nine months back, and she denied having ever had any former lesions upon the skin, and gave no history of having had any troubles pointing to syphilis. She had never had sore throat or rheumatism, had always enjoyed good health, and had never been sick. For the past two or three years she had had much headache, but of this she had been a great deal better since the appearance of the eruption. She had one healthy child 13 years old, but had no others and no miscarriages. Her sister died of consumption; her father was living, aged 69, and her mother had been dead eight years from causes unstated. She had been treated the most of the time during the existence of the eruption, and it had been nearly healed, but would again break out anew. She had taken all forms of tonics, arsenic, iron, etc., together with iodide of potassium, and had had various soothing ointments, and also caustics.

The diagnosis of syphilis was established from the rapid development of the lesion, its mode of attacking the nostrils, and the grouped and more or less circular distribution of its elements, together with the character of the scales and crusts. She was placed upon mixed treatment, and I learned from her physician that she recovered very promptly.

Mrs. M——, aged 45, consulted me February, 25, 1879. She gave no history whatever of syphilis. She had one healthy child; living, seven years old, and had also had another, which was still-born at full term on account of overwork on her part; she had had no other miscarriages. When first seen the end of the nose and the nostrils were the seat of a tuberculous syphiloderm, the whole organ being greatly enlarged, red, and inflamed, from ointments which had been applied; the septum of the nose was already destroyed, except a thin band at the end of the nose. The trouble had begun within the nose, and a year previous to her visit she had had a swelling over the bridge of the nose, for which plasters had been applied externally, and the nose had become more and more irritated as the disease progressed; portions of bone had come out from time to time during the previous year. •

The diagnosis of syphilis was established from the rapidity of destruction, from the absence of the separate pulpy tubercles of lupus, from the terribly foetid odor coming from the nose, and from the amount of inflammation present. She was put upon specific treatment with a mild zinc ointment to be applied freely, and within two months the entire disease had subsided. The nose was natural in color, though a little sunken, and the discharge and odor from within had ceased.

I have notes of several other very similar cases which need not be here detailed.

Sometimes the history of syphilis can be made out; but for some reason or other, it has failed to attract medical attention, and a lesion which yielded promptly to proper treatment has progressed destructively with its course long unchecked, as in the following case:

Mrs. H—, aged 30, a charming and beautiful lady, was sent to me by the late Dr. Budd, September 11, 1876, for advice in regard to a disease which had involved much of the circumference of the mouth on the left side. This had lasted something over two years, and had progressed in spite of the most varied treatment, at the hands of a number of prominent surgeons; it had always been regarded as lupus, and had been submitted to various caustic and other operations. As a last resort, it was proposed that a large portion of the lip should be excised and a plastic operation be performed; but before this was allowed, my advice was sought. There were then seen a number of cicatrices around the left angle of the mouth—some below and some above—extending somewhat beyond the middle line, and covering a good share of the upper lip on the left side, reaching, also, into the left angle of the nose. Just below and just outside of the left angle of the nose there was a circular spot of disease, with rather hard edges, somewhat depressed, and covered at the time with a crust formed by nitrate of silver. After this crust had come off, at the end of a few days, there was found an ulcerating surface, with a pultaceous and rather hard base; this mass was of a decided horseshoe shape, about three-quarters of an inch across the line of ulceration, the margin being about a quarter of an inch in diameter.

She denied entirely having had any eruption upon the skin previous to this; but on close questioning it was found that she had two miscarriages—one seven years previously, and another two years later, at eight months, the child having been dead two weeks; she had had no pregnancies since.

She had one healthy child living two years old. On several occasions she had had neuralgia, worse at night; she had also had pains in the bones, with some portions of the tibia tender to the touch. About six months previous to her visit, she had an attack of double vision, and a second attack two months later, which she said yielded after an oculist had given her some gray ointment which was rubbed into her legs. This latter attack was much worse than the first one, but yielded very soon, with steady improvement, when this treatment was resorted to. She had had sore tongue, from time to time, with white patches upon the top and sides. At the time of the visit she had four patches on the inside of the left cheek, and some, which were a little dubious, upon the throat. For the last six months she had had a tender spot upon the sternum, which was found to be a node; and there was also a tender point upon the left clavicle near the shoulder.

The improvement in this case, under the specific treatment, would seem almost miraculous to those unacquainted with the matter. Within six weeks, the eruption, which had lasted two years and had caused infinite pain in its treatment by caustics, and which had already produced very distressing scarring around the mouth, was virtually well; all ulceration had ceased, and although there was still a little hardness, it would hardly be noticed. The patient was seen nearly two years after the first visit, and the cure had remained permanent, and the cicatrices alone marked the seat of the former trouble. In this case, the marked horseshoe shape of the eruption, and its history of continually yielding in one place and reappearing close by, excited suspicion as to its true nature; and when the entire history was obtained, together with the confirmatory signs present, there could be no doubt with regard to its character.

These late tubercular syphilides may affect any portion of the body, but are far more likely to occur in locations which are exposed to injury, pressure, or friction, as in the following case:

Mrs. M——, aged 29, was sent to me October 15, 1877, on account of a large patch of ulcerative disease on the upper portion of the back. She gave no history of pains in the bones, no neuralgia, no headaches, no eye troubles, no loss of hair, no sore throat, and had never had any eruption but the present. The only thing possibly pointing to syphilis was the occurrence of three miscarriages—first at three

months; second five months; and a third between two and three months. Her husband had lived two years, and had died two years previous to her visit, of rapid consumption. Her father and mother had both died of consumption some years before. About nine months previous to her visit, she began to have some eruption on the back; and having then a cold in the chest, a mustard plaster was applied to the same region, which caused the immediate increase of the eruption; this had since spread and never healed, although it would partially cicatrize and then spread further on.

On examination there was found a group of crusted, ulcerated, tubercular masses, of a dark red color, arranged in a semi-circular or horseshoe shape, with considerable cicatrization in the centre. Five or six weeks previously she had struck her right elbow, and the resulting bruise had remained sore several weeks, and had just healed, leaving a decided circular cicatrix. The circular arrangement of the eruption on the back, with the history of its continued peripheral increase, together with the crusting and ulceration, pointed to the diagnosis of syphilis; the entire eruption healed very speedily under a specific treatment.

About six months after this she began to have a swelling of the left upper jaw, accompanied with great pain, she having neglected her treatment for some months; a dentist then opened the swelling and removed a number of pieces of bone. An operation was then performed, under chloroform, and more bone removed; and when she was seen a month or so later there was a deep, ulcerating and granulating surface over the region of the left lateral incisor and canine teeth. This healed again under specific treatment, and the adjoining teeth, which had been loosened, became firm. Much pain and distress would have been saved if the dentist could have recognized the true nature of the mouth trouble.

Undoubtedly very many cases which have been called lupus will be found, on close investigation, to be really tubercular or gummy forms of syphilis, and sometimes even skin lesions belonging to late hereditary syphilis imitate lupus very closely:

Julia S—, aged 23, was brought to my office by her physician for consultation June 26, 1879, with regard to an eruption upon the right forearm, which it had been proposed to destroy with the actual cautery. About the lower third of the limb, there was found a band of gummy desposits, about three inches in its greatest width, embracing most of the

arm. It was composed of an irregularly shaped ulceration, with many openings, some of which were covered with crusts, while, from others, pus exuded. There was much hardening of the entire tissues of the part. It was found that the upper central incisor teeth were most characteristically notched and pegged, and the lower ones were very small, of a size suitable for a child eight or ten years old. The forehead was square and prominent at the sides, and sunken in the middle. Three years previously, she had had trouble with her eyes, had double-vision, became blind, and was afflicted with them, in all, about a year. The eruption had begun about nine months previously on the anterior surface of the lower third of the right forearm, as a single, very hard lump, which was poulticed; it had opened and had increased since, continually suppurating and giving great pain, so as to prevent sleep. She had seen a number of physicians, and had received various local treatments without any benefit.

It was found that the mother had had ten dead-born children before the birth of this one, having previously had also a history of venereal sores; and she had also had a tubercular eruption upon the buttocks. Two years had elapsed between the last miscarriage and the birth of the present child, who was born apparently healthy; a small eruption, however, began shortly on the inside of the left thigh; the child had never been strong and well. The mother had had, in all, sixteen conceptions, and the children born previous to the miscarriages were living, most of them, and healthy.

The comparatively rapid development of the lesion, the great pain, the abundant, purulent discharge, together with the absence of the separate tubercular lumps of lupus, characterized the eruption, and the diagnosis of hereditary syphilis was abundantly confirmed by the almost complete disappearance of the lesion in a little over six weeks after beginning active, specific treatment.

In some instances the diagnosis of tubercular or gummy syphilis from scrofuloderma or strumous ulceration of the skin, is exceedingly difficult.

Louisa H—, aged 21, was brought to me in consultation August 22, 1879. She was a small, delicate-looking person, but one who had generally enjoyed fair health. The lesion, in her case, was situated on the outside of the right knee, just where pressure would naturally come in kneeling. There was one ulcerated spot about an inch in diameter, of a dull red color, with edges but slightly raised and sharply cut.

Towards the internal surface of the limb, a small ulcer, a third of an inch in diameter, was seen which was connected with the larger one by means of a sinus. After careful investigation of the case, it was decided that the lesion was not a syphilitic one, but a scrofuloderm. She gave no history of inherited syphilis, and presented no signs. She was placed upon cod-liver oil and iodide of iron, with the compound iodine ointment, diluted thoroughly, applied to the affected parts. There was some apparent improvement in this for a while; but the ulceration gradually increased, became more sore and inflamed, then became indolent, and a month after she was first seen, a new ulceration formed on the inside of the knee, while still under treatment. This had a large, black, rupial crust, and exuded pus from beneath it. She was then placed upon mercury with a little iodide of potassium, iron, nux vomica and bark, and the resulting improvement was very rapid. At the end of about a month the ulceration had almost healed; the original sore was entirely covered, but the one on the inside of the knee exuded still a little; shortly afterwards, the entire affair was healed.

While these cases have been noted, exhibiting an eruption which was recognized as syphilis, many more could be given which had been previously supposed to be syphilitic, but without foundation, as was strikingly exhibited in the case related in the early portion of this paper. The differential points cannot, of course, all be brought out in a single essay. The present object is to illustrate some of the difficulties of diagnosis, and to call attention to the necessity of absolute correctness in diagnosis, rather than to give instruction on points which are well brought out in text-books. In few departments of medicine is the necessity for absolute accuracy in diagnosis so apparent as in that of diseases of the skin. This class of affections has little tendency to self-cure, and is sufficiently rebellious to treatment, when rightly directed, not to have the difficulty increased by the possibility of the wrong application of measures, excellent in themselves.

This brings us to the consideration of the second portion of our subject, namely: syphilis. While mercury is recognized as most valuable and necessary, in this disease, and while iodide of potassium will remove, with delightful promptness, many of its severe lesions, either and both must be used

with discretion ; moreover, particular cases very frequently require not only their combination, but also the addition of many other remedies, while often neither of these drugs are applicable or available at the particular time or under the special condition presented.

I will not enter into the recently discussed subject in regard to giving mercury immediately on the appearance, or during the existence of the primary sore, except to utter the caution that it should not be prescribed unless the diagnosis of the initial lesion of syphilis is established. Multitudes of cases of chancroids and preputial herpes are with mercury unnecessarily. But when the sore is determined to be syphilitic, my opinion and practice is that it should be treated promptly and by mercury, used freely, internally and locally. Nor will I enter upon the subject of the excision of the chancre, which has had a number of able advocates. It is of undoubted value in certain cases where the sore is easily recognized and can be completely isolated, and there is but little question but that constitutional syphilis has been prevented by this means. But the difficulty of establishing surely the nature of the sore at a sufficiently early period is an objection of no little weight.

The question as to the length of duration of the treatment of syphilis is also one of great interest and magnitude, and the outside limits to which treatment should be carried are by no means as yet fully determined. The evidence is very strong, and my experience fully confirms it, that syphilis should be treated not only during the existence of actual lesions, or until they have entirely disappeared, but also for a not inconsiderable length of time afterwards ; this time is to be measured by months rather than by days or weeks. Two years have been set by many as an outside limit, but others are inclined to make the proper duration of treatment much longer—at least three years from the beginning. By this is understood not three years from the beginning of the disease, syphilis, but two or three years from the time when the patient first began to take medicine. It is not intended by this that three full years is to be occupied by the absolute taking of medicine every day for the entire period, but rather

the continuance of the case under the observation and guidance of the physician, with the administration of mercury, at interrupted intervals, during the entire period.

I need hardly say that the modern practice is not to give mercury in a manner which will, in any way, depreciate the health, but that it is employed in what has been termed tonic doses; this refers to quantities just sufficient to control the disease, and such as will come short of producing the physiological effects of the drug. Salivation should never be voluntarily induced, unless it is to the very slightest degree, for the estimation of the proper dose in the particular individual. When this is learned, the amount of the drug may be kept just within this limit, and yet produce all of its beneficial effects upon the disease.

Mercury I believe to be of advantage in all forms and during most of the stages of syphilis, although the greater the period of time which has elapsed since the beginning of the disease, the less direct control it has upon the lesions, and the more control is exercised by iodide of potassium. My practice, however, is to combine the drugs, in the large majority of cases, except that in the very earliest stages I more commonly, if not always, use mercury alone; iodide of potassium appears to be valueless in affecting the chancre, and exercises but little, if any, control over the early inflammatory eruptions. But in my judgment mercury and iodide of potassium exert a far more beneficial effect upon syphilis and its manifestations, when combined with other drugs, than when administered alone, and rarely do I prescribe them without the addition of such remedies as iron, nux vomica, bark, etc., and I am convinced from the study of many cases that the results thus obtained are far better than those gotten by mercury and iodide of potassium alone. If mercury is given in combination with iodide of potassium and with tonics, far less doses of the iodide will be required, and although most severe cases of late lesions have come under my care from time to time, I have never employed anything like the large doses of the iodide which have been recommended by others. When brain lesions threaten, or any large and important organ is attacked by the lesions of late

syphilis, iodide of potassium undoubtedly has a most powerful effect in removing the results of the disease, and may be used in increasing doses to almost any extent until the lesion yields. But these cases are exceedingly rare where this is necessary, and the smaller doses combined with mercury and with tonics, as before mentioned, suffice in the vast majority of cases.

But with regard to some of the difficulties which arise in the treatment of syphilis, it not infrequently happens that mercury will seem to aggravate the case, and that iodide of potassium cannot be digested, or that the disease progresses under both. The very late gummy manifestations of syphilis do not bear mercury very well, and sometimes they will seem to increase rapidly under the iodide. It will then generally be found that the organs of digestion are greatly at fault; the patient is saturated with drugs which are not assimilated, and consequently are not of service. The cessation of their use is then called for, and proper laxatives, pure bitter tonics, alkalies, etc., must be given to meet the indications of the case. Nitric acid has long had a greater or less reputation in connection with the treatment of syphilis, and its value is found just here, in the proper regulation of the digestive organs and in aiding the assimilation of remedies. I do not believe that it exercises the slightest control upon the syphilitic poison, or that it can remove its manifestations in the way in which mercury and iodide of potassium affect it; but by assisting the digestion, by stimulating the action of the liver, and as a tonic, it can and often does render most valuable service in the management of these cases of syphilis. The same may be said of certain of the sulphur waters, and of other mineral spring waters whose reputation is considerable in the treatment of these cases. These can not and do not control the disease, but by placing the system in a proper condition for the action of remedies which are in a measure specific, by increasing the secretions from, and restoring to health the emunctory organs of the body, the skin, kidneys, bowels, etc., they render cases amenable to treatment which otherwise have long resisted the proper remedies. In the same way we may get benefit from cod-

liver oil, also from the syrup of the lacto-phosphate of lime, and that of the hypophosphites of lime, soda and iron; such remedies may all be needed in the guidance of the syphilitic case.

In hereditary syphilis, especially that affecting the bones, the syrup of the iodide of iron, as advocated by Monti, of Vienna, is found to be of the greatest value, and often well replaces mercury and iodide of potassium; the syrup of the iodide of iron is also of value in many cases of syphilis in adults.

When one form of mercury disagrees with the patient, we have, happily, many ways by which the mineral can be introduced into the system. Mercurial inunctions are uncleanly and unpleasant, but at times are of great importance and should not be entirely discarded. A cleanly and convenient mode of administering mercury through the skin is by means of the oleate of mercury, which may be applied on various portions of the body, well rubbed in; the soles of the feet offer a convenient location, it being thoroughly rubbed in, morning and night, the same socks being worn continuously, perhaps with a bit of lint soaked in the oleate placed within them. Mercurial vapor baths afford a very prompt method of affecting the system, and two or three in succession will frequently be followed by excellent results upon a syphilitic lesion.

For internal administration we have also a variety of forms of mercury; the most valuable are the combinations with iodine, the proto-iodide and the biniodide; next, perhaps, comes the bichloride, next the bicyanide; after this blue mass, calomel, gray-powder, etc. When the iodide of potassium disagrees with the patient, iodine may be administered in other forms, such as the iodides of sodium and ammonium, also as iodoform, or in the compound solution of iodine, or the tincture alone, or in the more recently advocated iodide of starch.

In attempting to call attention to some of the difficulties in the diagnosis and treatment of this disease, syphilis, I have emphasized the necessity of absolute accuracy in diagnosis, and have spoken of some of the difficulties attending

the same; I have also shown that great caution must be exercised in rightly developing and understanding the symptoms presented, and that especial care should be given to recognizing the features exhibited by the eruption. I have also called attention to the fact that other lesions of the skin than specific are constantly seen in syphilitic persons, and that the history of having had a venereal sore, or even of having had syphilis itself is not a necessary proof that the eruption present at any one time is a part of the disease.

In connection with the few points mentioned in regard to the therapeutics of the disease, I would especially urge the recognition of the fact that in managing a case of syphilis the patient is to be considered, as well as the disease. Because syphilis is present, the patient is not simply to have a prescription for mercury in some form, but careful investigation must be given, that exactly the proper remedy or remedies may be applied to the case in question. In a word, I have endeavored to call attention to the fact that, although syphilis is a disease caused by a definite poison, always the same, over which the definite remedies, mercury and iodide of potassium, do exercise a controlling power, still, practically, syphilis presents difficulties in diagnosis and treatment, and careful study of each case is necessary for thorough success in its management.

ART. II.—**Pneumonic Phthisis.** By WILLIAM PEPPER, M. D., Philadelphia, Pa.

The patient, 23 years of age, single, by occupation a sewing girl, was admitted to the hospital on the 19th of February. She told us, when she came here, that she had already lost two sisters from consumption, but that she herself had always been entirely healthy until about a year before the time of her admission. She dated the beginning of her sickness back to a day when she became very much overheated, and was immediately afterwards chilled through. Following this plain history of an acute beginning, came cough, pain in the right side, and fever. There was no spitting of blood at first. There was some loss of flesh, but according to the patient, neither the pain nor the loss of flesh were persistent

symptoms. Five months ago the woman caught a fresh cold, and since that time her monthlies have not made their appearance. Lately the loss of flesh has been more marked, and there has been greater depression and weakness than was previously the case. Even in the past five months, however, none of her symptoms have been as pronounced as might have been expected. Her case has been subject to very marked occasional remissions and exacerbations of intensity. Since she caught the second cold her cough has been more persistent, and the sputa more abundant, taking it all in all. Nevertheless, no one would suppose, from outward appearance, that the girl was suffering from any grave disease. Upon admission, her temperature was 101° , her pulse 118, and her respiration 24. She was quite feverish. The patient was evidently, at the time, laboring under an acute exacerbation of the disease. Her urine was high colored, but the most careful examination failed to reveal the presence of any sugar, or of any albumen. Physical examination of her chest very soon convinced me that there was a cavity of unusual size in the right lung. Auscultation revealed metallic respiratory murmur, with occasional metallic tinkling sound. When the patient talked in a loud tone, or, better still, when she whispered, there was distinct amphoric echo of the breath sounds. These signs were conclusive in pointing to the existence of a very grave pulmonary lesion on the right side. The other lung, at the time of first admission of the patient, was perfectly healthy, except at the apex, where the percussion note was duller than should be, and the respiratory murmur was somewhat harsh. Of late, I have had occasion to remark once before, the girl has expectorated a great deal of muco-purulent matter, which is very frequently tinged with blood. The resident physician, Dr. Collins, says that the sputa must amount to a pint, or over, in the course of the twenty four hours. On some few occasions, quite recently, the matters expectorated have had quite an offensive odor. We have treated the patient with cod-liver oil, the syrup of the hypophosphites, small doses of arsenic, and plenty of good nourishing food, up to within the past week or so. Unner this *régime* she has shown the most extraordinary improvement. She gained five pounds in weight almost immediately, and began to look well and rosy. Her breathing became less oppressed, and her fever went entirely away. Her temperature was steadily in the range of the nineties—never running above $99\frac{1}{2}^{\circ}$. Had any one of you gone into the wards at that time you would have

asked, "What is this healthy looking, active girl, doing in the hospital?" This was her condition until about a week ago, when she grew pale again, and her temperature began to show a marked tendency to rise, mounting up, once, to 101° . There was still the most marked metallic respiration on the right side. The percussion note was, on the other hand, very likely to mislead one not trained in noting small differences of sound. It seemed of perfectly normal pitch, but on comparing it with that elicited from the healthy lung, it sounded amphoric—almost tympanitic in pitch. When the girl spoke in loud tones, or whispered, a distinct metallic echo could be heard. The physical signs, in fact, seemed to be much the same as those which were elicited at the date of admission, except that they were now and then obscured by a loose bronchial r le. The left lung still showed some dullness at the apex, with hard respiration. While, however, the physical signs had remained almost entirely stationary, the rational signs had undergone a most marked exacerbation.

The significant cause of the physical signs was undoubtedly that there was an enormous cavity in the right lung, destroying nearly all of its tissue, while the left lung was but little diseased. The cavity in the right lung is certainly the largest which has ever come under my notice.

The question now arises, How was this cavity produced? Is the case strictly one of gradual destruction of lung tissue, as in tubercular phthisis? I think not. I should rather ascribe the present condition of the right lung to a latent pneumonia, which led in time to pneumonic phthisis. The lung was the seat of a cheesy degeneration; then there followed the breaking down of the softened lung tissue, leading to the formation of a cavity. The history of the case favors, I think, this view—the acute beginning, the extensive disease of one side of the lungs, and the slight affection of the other side. The right lung to-day is almost liquified. We might, indeed, call this case one of pulmonary abscess, were it not for the local irritation set up and for the very evident constitutional tendencies. The left lung is slightly tubercular at the apex. The right lung has been destroyed by a pneumonic action.

I want to call your attention to the great disproportion between the rational symptoms and the physical signs of the

disease. I very often see just such cases as this one. Of course the physical signs disclose the true nature of the case and the true extent of the disease, but it does not do to base your prognosis upon the physical signs, in such an instance. I desire to illustrate a very nice point of prognosis from this case. *In a case of pneumonic or tubercular phthisis, where the general symptoms are favorable, i. e., are not grave, while the physical signs, on the other hand, point to the existence of very serious disease of lung structure, the prognosis will turn upon the showing of the general symptoms, rather than upon that of the physical signs.* To give more particular force and point to this general rule, I would say that in this case the indications of general good health would lead me to say confidently, although the physical signs are such as they are, that the disease is likely to remain comparatively latent, that the fatal issue, though certain, is likely to be postponed for some time to come. *So long as the general health is comparatively good, the lung disease is likely to remain more or less stationary.* The events of the last few days may change this present view of the case. If the fever and cough increase, and night sweatings and dyspnœa, with general loss of flesh and strength, make their appearance, I shall know that the tubercular disease of the left lung apex is increasing, and, of course, modify my prognosis accordingly. At present (I wish you to understand me thoroughly) I say that the ultimate prognosis is bad, very bad, but that death, though none the less certain, may be more or less delayed owing to the comparative latency of the disease in the left lung.

How are we treating the girl? We have been giving her, and we shall continue to give her until the temperature becomes normal, Niemeyer's pill—at least a pill resembling Niemeyer's, which we use at this hospital. This pill contains belladonna, digitalis and quinine, but not any ipecacuanha. She takes this prescription thrice daily. It is already beginning to control the febrile manifestations. In addition to this, she is taking inhalations of Lugol's solution (of the strength of five minims to the ℥j of water) by the atomizer. When the Neimeyer's pill brings down the fever, we will put the patient on cod-liver oil, the syrup of the hypophosphites, and arsenic again.

Clinical Reports.

Vesico-Vaginal Fistula, Cured by Position. By J. F. WINN, M. D., Richmond, Va.

The following case came under my observation in Fluvanna county, Va., while associated with my father, Dr. R. J. Winn:

On the 23rd January, 1881, he was called to see Mary B., colored, aged eighteen, suffering from incontinence of urine and extensive excoriation of the genitals therefrom, supervening upon the birth of a large, still-born child, at full term, four days before.

She was not attended by any physician in this, her first confinement; consequently the history of the labor must necessarily be meagre. The fact was obtained from the mother, however, that the labor was *tedious*—lasting forty-eight hours. (Her mother is a “monthly nurse,” and was the officiating accoucheur.) Whether her statement be correct or not, this much was plainly evident, viz.: A vesico-vaginal fistula detected, both by digital and speculum examination.

The patient was informed of the ultimate necessity of an operation after involution had occurred, and she had obtained some relief from the scalding urine. As a means of affording *temporary* relief from the trouble, she was placed in the *genu pectoral* position, with instructions to remain thus as long as consistent with comfort, thus enabling the urine to collect in the fundus of the bladder. No catheter was introduced, but she was directed to *change her position* at intervals of three or four hours, and let the contents of the viscus pass away.

A moderately strong solution of bi-carbonate of soda was ordered to be given as a vaginal enema immediately after each urination, as also a vaginal enema of carbolic acid solution, three times daily.

With these general directions, she was left with instructions that her father must report in eight or ten days, reporting the progress of the case. Failing to receive any tidings of the case, a verbal request was sent to know why such report had not been made. Whereupon, on the 12th day of February (just twenty days from beginning of treatment), he reported that his daughter was *well*.

To satisfy ourselves of the truth of the old man's state-

ment, we made a special visit on the 14th February, and to our gratification and no little surprise, we found a firm, smoothe cicatrix, taking the place of the fistula, which, three weeks before, gave every indication for the necessity of surgical aid.

No claim is made here for originality; for similar results have been obtained in the hands of other practitioners. Yet the facts named prove the value of *position* in the management of vesico-vaginal fistulæ, of *recent* origin, and warrant its fair trial before resorting to the usual operations.

Correspondence.

Chinese Healthiness and Death Rate.

Dear Doctor,—I have just returned this P. M. from a visit to the seaside for the benefit of my health, which has suffered seriously from an obstinate malarial attack, and find your kind note enclosing copy of an article from the August number of the *Virginia Medical Monthly*. The article in question seems to have been based upon something said in the July number of *Good Health*, but, if it refers to me, as you appear to think, I am at a loss to know where the latter journal obtained its information. In the first place, I never made a report of any kind, either as the "Medical (Executive) Officer of the State Board of Health of California," or in any other capacity, to Congress. My reports, as you know, are made to the Legislature of the State, but in none of them can be found the expression of an opinion that "disease or pestilence" has never "originated or spread" in the Chinese quarters of our cities. The facts are just the reverse.

In San Francisco, the Chinese population, according to the U. S. Census, is 22,000, and the annual death-rate per 1,000 was 21.77 in 1881. The population of all other nationalities was 211,700, and the death-rate 17.20 per 1,000, 4.57 per 1,000 less than is shown in the Chinese quarter, notwithstanding the fact that the Chinese population is composed almost entirely of adults.

This excess of mortality among the Mongolians is to be attributed mainly to their mode of living, their disregard of sanitary rules, the wretchedly-crowded tenements, the damp, close and disgustingly filthy cellars, in which many of them live.

There must be a mistake somewhere, or the editor of *Good Health* has been imposed upon. That the State Board of Health or any of its members should have attributed "the healthy condition and immunity from disease" among the Chinese "to their frugal life and cleanliness" seems, to those familiar with the facts as they actually exist, and acquainted with the members of that Board, more like a practical joke than the sober utterances of a dignified journal.

Equally untrue is the statement made in the copy of the article referred to, that "there are fewer cases of small-pox among them (the Chinese) than among the whites, the ratio of population being allowed" at least, if we may judge by the relative mortality. For the year ending June 30, 1881, the Health Officer of San Francisco reports fifteen deaths among the Chinese by this disease, and seventy-seven among all other nationalities. The ratio for the first, per 1,000, is 0.68, and for the second, 0.36. I apprehend that it is quite impossible to determine the exact number of cases of small-pox among the Chinese in San Francisco, it being their habit to conceal such cases from the authorities, except when they are fatal.

Again, among the Chinese at San Francisco, the deaths by constitutional diseases, are very nearly double those among all other nationalities, in proportion to the population, the rate per 1,000 being 6.3 for the former and 3.3 for the latter.

I think, Doctor, that more attention has been paid to the subject of the article to which you have referred me than its importance deserves. I have noticed it only in deference to your opinion that the errors it contains should be corrected. The ideas intended to be conveyed by the article, purporting to have been based upon the report of the "Medical Officer of the State Board of Health of California," are so at va-

riance with those entertained by myself, that I cannot help thinking that some other person is referred to.

Very truly, yours, F. W. HATCH, M. D.

Sacramento, Cal., August 27, 1882.

[We are sorry to have been led into making a mis-statement by so excellent a journal as *Good Health*, upon which we relied for the facts. But all of us seem prone to err sometimes. We are only too thankful to Dr. H. S. Orme, of Los Angeles, Cal., for calling our attention to the matter. We were so surprised upon reading the detail or mention of the facts, as given in *Good Health*, and thinking that, perhaps the record of the true state of things in our *Journal* might be of instructive value to some of our readers, we determined to put in the item. We are always sorry to use our space to correct errors, but as manly honesty oftentimes demands retraction of statement or modification of opinion, we very cheerfully insert the full letter of Dr. Hatch, and trust that all our readers will return to their old ideas—that the Chinese are neither the cleanliest nor the healthiest of the tribes of the Earth.—EDITOR.]

To the Medical Public—Correction.

Mr. Editor,—The second volume of "The International Encyclopædia of Surgery," published by Wm. Wood & Co., and edited by Prof. Ashhurst, of Philadelphia, was received by me two or three days ago; and I find attached to my name, which appears in several places in the book, the title of "*Emeritus* Professor of Surgery in the Medical College of Virginia."

Several years ago, I resigned the chair of Surgery in this College, and since that time have had no connection whatever with the institution; and it is difficult to express my surprise and mortification at this mistake. I did not see the proof-sheets of the article I wrote for the above volume; and as the Editor was alone responsible for the addition of such a title to my name, I at once wrote to him about it. I received his reply to-day, in which, after expressing his regret at the error, and saying that he would have it corrected in the stereotype plates, so that it would not appear in future issues, he adds: "I can only account for the mistake by supposing

that I saw the statement, that you had been made *Emeritus* Professor, in some journal."

While it is impracticable to correct entirely such a mistake, it is due both to the Medical College of Virginia and to myself, that it should be done, as far as it is possible.

HUNTER MCGUIRE, M. D.

Richmond, Va., Sept. 19th, 1872.

Proceedings of Societies.

Medical Society of Virginia.

One of the most pleasant and profitable sessions of the Medical Society of Virginia ever held convened at the Fauquier White Sulphur Springs, on Wednesday, September 13th, 1882, and continued through Thursday and half of Friday. Such a generally accurate and full report of the proceedings is given by a special reporter in that remarkably wide-awake and excellent weekly journal—the *Medical News*, published by Messrs. Henry C. Lea's Son & Co., of Philadelphia—that we adopt the report entire.

FIRST DAY.—AFTERNOON, *September 13.*—The Session convened at 3:45 P. M., Wednesday, September 13, 1882. Because of the illness of the *President*, Dr. G. William Semple, of Hampton, Va., the *First Vice-President*, Dr. W. L. Robinson, of Danville, Va., assumed the chair. The *Recording Secretary*, Dr. Landon B. Edwards, of Richmond, was in place.

Address of Welcome.—Dr. John McIlhaney, of Warrenton, President of the Fauquier County Medical Society, introduced Hon. J. G. Brooks, of Warrenton, who, on the part of the medical profession and citizens of that section of the State, delivered an address, in which a cordial welcome was extended.

A Letter from the President (Dr. Semple) was then read, in which he expressed his great disappointment and regret in that he was unable to attend, etc. This letter, on motion, was ordered to be published in the annual volume of *Transactions*, and a vote of sympathy was given by the Society.

Dr. John N. Mackenzie, of Baltimore, Md, was introduced as a *fraternal delegate* from the Medical and Chirurgical Faculty of Maryland. He was invited to a seat in the body and to participate in the discussions that might come up during the session.

In the absence of all the members of the standing *Committee on Nominations of Applicants for Fellowship* in the Society, the Chair appointed a committee of five to act in their stead. The committee *pro tem.* was composed of Drs. J. E. Chancellor, of Charlottesville; C. C. Conway, of Rapidan; John R. Wheat, of Richmond; G. Wm. Pollard, of Ayletts, and Bedford Brown, of Alexandria. In a short time this committee reported favorably upon all the applications presented. [During the session forty or more new members were added—one of the largest additions to the membership of the Society during any one year for ten years.]

The Report of the Recording Secretary showed the receipt of the usual number of exchanges; the issue of two "certificates of fellowship;" the disclaiming of membership of another member; the dropping of two other members from the Register; the registration of two members who report themselves as over 70 years of age, and consequently no longer responsible for dues or assessments; the resignation of five members—three because they had removed from the State, and one who had retired from practice; one doctor should have been reported last year as having resigned. Information of the deaths of only two Fellows during the year has been received. Present membership of the Society, including those who joined during this session, *about* 450.

On motion of Dr. S. K. Jackson, of Norfolk, a committee of five was ordered to be appointed to express the sense of this Society in regard to the *action of the New York Medical Society* during its last session which relates to the change of the Code of Ethics of the American Medical Association, and which proposed change admits of consultation on the part of regular practitioners with irregulars. The acting President appointed Drs. S. K. Jackson, M. L. James, of Richmond; O. H. Baird, of Waverly; Wm. D. Cooper, of Morrisville; and M. A. Ish, of Neabsco Mills—with instructions to report to-morrow morning.

The Report of the Necrological Committee was then presented by letter from the Chairman of the Committee, Dr. John S. Apperson, of Town House. The report was referred, without reading, to the Committee on Publications.

Dr. Joseph A. White, of Richmond, offered a resolution requiring the attendance of every member at the session at which he may be elected to any office in the gift of the Society. This suggestion awakened a lively discussion, and, after a lengthy debate, it was agreed that a vote should be taken on the subject to-morrow morning, without further remarks.

On motion, a committee of thirteen Fellows was ordered to be appointed to nominate officers—other than the President and Assistant Recording Secretary—for the ensuing year, said committee to report to-morrow at 12 o'clock.

The Society then adjourned until 8 P. M.

EVENING SESSION.—8 P. M.—As soon as the meeting was called to order, the acting President (Dr. Robinson) made a few remarks as a substitute for the *President's Address*. He greeted the members with a joy born of twelve months' pleasurable anticipation. To those either too careless to investigate, or too ignorant to appreciate, the advantages of sustaining a State Medical Society, he proffered his profound pity. The life of this Society meant sustenance of medical ethics, brotherly love, advancement by study and principle to the standard to which each one is eligible. In regard to other matters, he thought that Richmond was the best place for annual meetings, especially during the week of the usual annual Agricultural Fair, which occasion always attracts a large number of practitioners to that city, in company with the crowds of other citizens from all sections of this and adjoining States. Forbid banquets by the local societies. He favored the election of a President at the beginning of a session. He urged that papers read before a meeting should be discussed before reference to the Committee on Publication. The "Ex-President's Prize," as offered this year, is undoubtedly a step in the right direction. After a complimentary allusion to the worth of the President of this Society, and an expression of sympathy because of his present ill-health, which alone prevents his attendance, he closed by congratulating the doctors of this section because of the large additions made by them to the membership of this Society.

The reports of the Standing Committees on Progress in the various departments of medical science were then called for. The first presented (by the author) was the *Report of the Committee on Surgery*, of which the following is an abstract:

Drainage in Gunshot Wounds.—Dr. Hugh M. Taylor, of Richmond, Va., limited his report to a consideration of the value of drainage in gunshot wounds. He showed the important part which drainage plays in the treatment of all classes of wounds, by referring to the "open method;" to Callender's and Lister's methods; to the cotton-wool dressing of Guerin; to the dry-dressing of Gamgee, and to the sponge dressing, recently made prominent in this country by McClellan. In all of these most prominent methods of

treating wounds, now in vogue, drainage is secured and forms the most important adjuvant. In a class of wounds, defined as contused and lacerated, in which sloughing, granulation and cicatrization invariably occur, and in which there are many conditions to prevent free escape of inflammatory products, we must find free drainage of the greatest importance. The means of securing drainage, which he mentioned, are position, incision, dilatation, rubber tubes, glass tubes, decalcified bone, strands of horse-hair and silk tents, canula, and such other agents as sponge, absorbent cotton, cotton-wool, etc., which exert capillary attraction.

After dwelling upon the local and constitutional good secured by drainage, the importance of drainage in gunshot wounds of special parts was considered. Few surgeons now question the advantage of treating suppuration in joints by free incision, drainage, and antiseptic washes. Penetrating gunshot wounds of the joints are invariably attended with suppuration, which should also be treated by free incisions, drainage and antiseptic washes. In gunshot wounds of the extremities, we are taught the value of drainage by the good it effects in compound fractures of the extremities. In pyonephrosis and rupture of the kidney, the indications are clearly in favor of free incision, and the use of drainage-tubes, to evacuate collections of pus or urine; and the success which attends this treatment points clearly to the course to be pursued in gunshot wounds of the kidney. The early removal of blood, serum, pus, and urine is the key-note to the successful treatment of such wounds. In abscesses and cystic disease of the liver, more reliance is placed on aspiration, free incision and drainage; and in gunshot wounds, more reliance should be placed in free incision, drainage, and antiseptic washes. The mortality which follows gunshot wounds of the liver, treated upon the expectant or do-nothing plan, warrants a resort to active operative interference. The indications in favor of drainage in gunshot wounds of the bladder are too plain to admit of discussion. To prevent its consequences, such as pelvic cellulitis and peritonitis, nothing can take the place of drainage. In no gunshot wounds is drainage more important than in those of the head. To prevent compression by the retention of inflammatory products, to avoid blood-poisoning, and to encourage repair of the local injury, drainage is absolutely needed. No sutures and no plaster, after penetrating gunshot wounds and after trephining, should be used—only some light absorbent dressing.

The cases of penetrating gunshot wounds of the chest which recover, are the cases in which thorough drainage has been practised. No surgeon now thinks of hermetically closing a penetrating wound of the chest. On the contrary, we are instructed to keep the wound open—of course the most dependent, if there are two wounds; and even, if necessary, to make a free counter-dependent opening, and introduce a drainage-tube. In empyema, great good is accomplished by aspiration, paracentesis, incisions, drainage-tubes, and flushing out the cavity; and the analogy between the consequences of gunshot wounds and empyema is too striking to be overlooked. In the loose cellular tissue of the mediastinum, suppuration is active, and large collections of matter resulting in pyæmia and death is a frequent sequence of gunshot wounds of this region. If nature's efforts are found to be inadequate to the task of securing perfect drainage, they should be aided by incisions; and, if necessary, by the introduction of a drainage-tube. Rosenstein, of Leyden, has recently drained a suppurating pericardium by means of a draining-tube. His case is unique, in that it is the first in which the pericardium has been opened and a drainage-tube introduced with the specific object of removing purulent fluids. The success of this case points clearly to the best treatment for penetrating gunshot wounds of the pericardium which are not immediately fatal. The value of drainage in penetrating gunshot wounds of the belly, is attracting more attention than any subject connected with the treatment of gunshot wounds. Attention was first called to this subject by Dr. Hunter McGuire, of Richmond, Va., in 1873. Afterwards by Dr. Marion Sims, of New York, and again by Dr. McGuire in 1881, during the session of the American Medical Association. Over 92 per cent. of the patients operated upon for ovariectomy recover. Over 90 per cent. of gunshot wounds of the peritoneum die. In the former, and not in the latter, the importance of thorough drainage has been appreciated. Operative interference to repair the injury done and to secure perfect drainage is of the last importance in penetrating gunshot wounds of the belly.

The conclusions arrived at by the writer, are:

1. That union by primary adhesion is exceedingly exceptional in gunshot wounds.
2. That suppuration, granulation, and cicatrization, are invariably combined in the process of repair.
3. That extensive accumulations and burrowing of pus in

a deep, narrow bullet track, are to be expected and feared.

4. That the deep, narrow, angular, and frequently obliterated track does not afford perfect drainage.

5. That in such cases the principles of surgery applicable to other deep-seated suppurations must be applied.

6. That position, incision, dilatation, drainage-tubes, and the other means mentioned, are of great importance in treating the consequences of gunshot wounds.

7. That, by nature's efforts, analogy, and reason, we are taught to think that their more frequent use will lead to better results in this class of injuries.

8. That the danger incident to their use is far outweighed by the benefit which accrues.

On motion, this paper was referred to the Committee on Publications, with authority to publish.

Discussion.—Dr. R. I. Hicks, of Casanova, remarked, in regard to gunshot wounds of the chest, that if Dr. Taylor meant that drainage-tubes should be introduced to anticipate any collections of noxious matters, he could not endorse the suggestion, because he had seen too many cases of gunshot wounds of the chest recover without any bad symptoms, upon the expectant plan. But he supposed that all surgeons of the present day agree that collections of pus or other offending matters should be evacuated, if practicable, wherever found. This principle is as old as the fathers of medicine.

He had also seen several wounds of the abdomen recover in like manner; and, even in these cases, interference should be withheld until it was ascertained that offending matters were either retained, or were in the act of formation. If formed, he entirely agreed as to the importance of early removal or evacuation—because under the non-interference plan in such cases, death almost inevitably results.

Dr. J. E. Chancellor, of Charlottesville, spoke of two cases met with in his practice bearing upon the point at issue. The first case he alluded to was that of a Confederate soldier, of high position, who, during one of the battles of the Confederate War, was wounded between the sixth and seventh ribs of the right side. The Minnie ball came out under the lower angle of the scapula of the same side of the body. There was expectoration of blood and the other usual signs of complete perforation of the lungs, the pleura and the chest walls. In a few days pus formed; some was expectorated and some passed out through the wounds of entrance and exit; there was also some pleuritic effusion. This con-

dition, of course, was attended by cough and dyspnœa. The soldier was brought to the hospital at the University of Virginia, of which Dr. James L. Cabell, Professor of Surgery in that institution, had charge. An opening was made with the knife along the lower border of the sixth rib, and eight or ten fluid ounces of pus were drawn out. After this operation, the patient fell into the hands of the reporter [Dr. Chancellor]. Carbolic washes of the wound—externally and by injections—were resorted to, and drainage by means of a gum catheter was adopted as the general line of treatment, with such supporting regimen as seemed required from time to time. In addition, treatment by position was followed out, so as to let either one or the other of the external wounds be dependent, and thus facilitate drainage. This plan of treatment was kept up for some weeks or two months, by which time restoration to health was rapidly advancing. The body was then noticed to be much “drawn” to the right side. Within a few months, however, the lungs were invaded by deposits, which appeared to be tuberculous, and the patient died. Still, the lesson learned from this case was “the value of drainage of gunshot wounds;” for the patient, after recovery from the wounds themselves, was able to ride about or go where he pleased; and while he did complain occasionally of “stitching pains” at the points of both wounds for some time afterwards, as well as “heavy pains” along the track of the wound through the lung, it was several months later that the tubercular trouble began. The Doctor *knew* nothing about the history of consumption in the family of the patient.

The other case bearing on this subject, was that of a married lady, of some thirty years of age, from Texas, who, ten years ago, while dancing one of the round dances, as she professed, had her right side too much compressed. She was not “well” at the time of her dancing; but being fond of the amusement, she danced immoderately, whenever opportunity offered. But soon after the special dance referred to, she had hepatitis, followed by an abscess of the liver, which “pointed” on the right side between the ninth and tenth ribs. An incision was made in the most dependent part, so as to evacuate the pus. After this, “a drainage position” was directed. Then a drainage-tube was inserted, but it did not act well; it became clogged too frequently to accomplish the ends in view. In studying how to promote the discharge of purulent matter from the cavity of the abscess, he determined to resort to properly applied com-

pression. He adopted a specially prepared spring truss—the drainage-tube being frequently taken out for cleansing purposes, and re-inserted. This treatment was kept up for a month or more, under Dr. Chancellor's care, when she was sent to the Rockbridge Alum Springs, Va., where the resident physician, Dr. Samuel B. Morrison, followed out the same general line of treatment as had been pursued, chiefly draining locally, and tonics internally. She recovered her health perfectly, so far as is known, to this day.

Dr. Samuel C. Gleaves, of Wytheville, addressing Dr. Chancellor in regard to the last mentioned case.—“Was the drainage-plan of treatment the cause of the cure?”

Dr. Chancellor.—“Yes, I believe it was.”

Dr. Gleaves.—“If the pointing abscess had simply been lanced sufficiently at the most dependent point, and the proper position of the patient been ordered and followed out by the nurse, would not sufficient drainage have been kept up?”

Dr. Chancellor.—“Yes; but with the carelessness of nurse, or disobedience of patient, it is impracticable to depend upon the exact following out of such instructions. Of course, you must be careful, under such circumstances, to keep the incision wound open.”

Dr. Gleaves.—“What, then, is the use of the additional irritation caused by the insertion of a drainage-tube?”

Dr. Chancellor.—“I do not admit that the proper introduction of a properly devised drainage-tube causes improper irritation. It frequently happens that the very irritation caused by the gentle introduction of a drainage-tube into a deep abscess of any part of the body creates exactly that kind of ‘irritation’ which is most desirable for repair of an indolent ulcer or abscess.” In furtherance of these views, he mentioned the case of a man who was shot laterally in his knee-joint—the ball going through and through. Such cases generally end fatally, unless amputation of the thigh is undertaken; and even then many failures of success occur. In the case briefly reported by him, the drainage-tube plan of treatment was adopted, and the patient thoroughly recovered, with the exception that he left with an ankylosed knee. “Was that not better than having either an artificial limb or an amputated thigh?”

Dr. Gleaves then referred to a case, some time ago under his charge, of abscess of the liver. After opening it, he could not get it to heal while pus was flowing from it, or while it was secreting.

A Member.—“Of course not. Ought to have inserted drainage-tube, and thus have caused sufficient inflammatory irritation. Dr. Gleaves himself said, ‘*ubi fluxus, ibi irritatio.*’ The flow ought to continue when there is no irritation, and for a stronger reason ought to continue while there is irritation of the abscess.”

Dr. Taylor, the author of the paper under discussion, referred to the autopsy of a case which had induced him to believe in drainage wherever there was deep-seated abscess, or even wherever a superficial one, of large size, with its external opening was constantly clogged up. He believed in drainage, especially in all major operations. If position or the potency of the opening would not permit proper drainage of the foul matter—whatever that matter might be—then establish a means artificially for free drainage. If the chimneys of a closed house do not carry off the poisonous effluvia of a house, then let the doors and windows be opened. So in regard to abscesses or poisonous effusions in the abdominal cavity. If the opening by the wound of entrance or exit is not sufficient to admit of drainage—the escape, indeed, of the poisonous secretion, whatever may be its character—then make an artificial opening intelligently, and keep in this wound a perfectly secure drainage-tube—whatever may be the kind or shape of the drainage-tube required for the special case under charge.

Under call for volunteer papers or reports, Dr. Hugh T. Nelson of Charlottesville, reported the following case of

Urethral Stricture of Twenty Years' Standing, in which Perfect Cure of the Lesion was Effected by Vis Medicatrix Naturæ Alone.—The case was one of unusual interest. Mr. B., a country farmer, aged 63, had attacks of gonorrhœa in his younger days, and hence became the subject of retention of urine. He applied for treatment on May 4, 1882. He had had stricture of the urethra for twenty years, and had been under physicians of prominence previously, but no operation had ever been performed. On the day named, however, after continued and violent efforts at micturition, the bladder had been emptied before the doctor saw him; he had suffered great pain for several hours, and had evidently only been relieved by the relaxation following upon intense vesical distention. A No. 5 bougie was introduced, passing, on its way to the bladder, through the cartilaginous strictures, one embracing nearly an inch of the urethral extent, the penis being very large, and seemingly œdematous. Mr. B., with considerable difficulty, managed to keep the bladder com-

fortably empty until the 9th, when complete occlusion of the urethra forced him to seek professional assistance. The No. 5 bougie was passed, but with great difficulty, from the contracted state of the stricture; and after the beak of the instrument had entered the bladder, the grasp of the stricture was so great as to prevent further introduction. The bougie was withdrawn with great difficulty, and a smaller catheter passed, which cut the urethra a little, but emptied the bladder perfectly and with great relief.

The patient now called attention to an enlargement in the corpus spongiosum; an examination of this showed at about the middle of this portion of the urethra, and consequently covered by the scrotal folds, something that appeared to be a fibroid growth, about the size of a pigeon-egg, and corresponding to the most undilatable of the strictures. He was seen daily for several days, and the bougie was used regularly with apparent improvement in the condition of the stricture. On the 13th, he was so much relieved that he declined further treatment, and determined to return home on the 15th. About noon on the 14th, however, the Doctor was summoned in haste, and found the old man suffering great pain, and straining violently in ineffectual efforts to empty the bladder. The scrotum was found enormously distended; its more superficial tissues very much thickened and hardened. No fluctuation was detected, the absence of which, together with an entirely normal state of the *perineum*, made it highly probable that the condition was due to erysipelas of the superficial and deep tissues, though the possibility of urinary infiltration was not lost sight of. The bougie was passed with relief, and the ordinary treatment appropriate to an erysipelatous condition of the parts was instituted. On the morning of the 15th a large patch of gangrene occupied about three-fourths of the enormously distended scrotum, from which the cuticle was entirely gone, and a fetid, sanious ooze escaped. Early on the 16th, there was no further extension of the gangrene, and a line of demarcation was visible; but the œdema was extending upon the pubis, the perineum still retaining its natural condition. On the evening of this day, Prof. J. S. Davis, of the University of Virginia, saw the patient in consultation, and gave, as his opinion, that the case was one of urinary infiltration, consequent upon rupture of the spongy urethra, and the diagnosis was immediately verified by the modified operation for *anterior perineal section*, which was performed by Dr. R. W. Nelson, of Charlottesville, Va. Over one pint of

urine and several ounces of pus escaped from the incision, and for several days urine dribbled from the wound, small quantities being also discharged from the meatus several times each day. Except on the two occasions mentioned, there had never been perfect retention, and the urine, though passed in small quantities, had always seemed to reach a fair twenty-four hours average. A stimulant and tonic treatment was kept up; the large gangrenous mass sloughed away, exposing both testicles, which were covered by the tunica vaginalis alone; the amount of urine passed through the meatus continued to increase, accompanied by a corresponding diminution in the quantity which passed from the large wound. The granulations were most satisfactory, and by the first of July both testicles were completely enveloped by a good healthy scrotum, accompanied, it is true, by retraction of the penile integument, which renders perfect erection impossible. The strictures are entirely relieved, and the urine is passed in a fuller stream than ever before, and this, although neither catheter or bougie was ever introduced into the urethra after the operation.

Dr. Nelson, in connection with this subject, exhibited a catheter bougie, as made and used by Dr. R. W. Nelson, of Charlottesville, Va., in cases of urethral relaxation and prostatic trouble, in which even the eye of a soft rubber catheter occasioned sometimes troublesome hæmorrhage. The instrument is always introduced in its bougie form, then opened to empty the bladder, and *never* closed until *after* withdrawal.

Dr. George B. Jennings, of Ruckersville, was requested to report *an unusual case of sloughing of the penis and scrotum*, and promised, by request of several members, to report it in full, in writing to the *Transactions* of the Society for this session. The chief point of interest in the case was that of ulceration of the under portion of the penis and the major part of the scrotum, including the testicles, leaving several urethral sinuses or openings between the bladder and the mouth of the urethra.

After this report, the meeting adjourned until 10 A. M., Thursday.

SECOND DAY—MORNING, *September 14th.*—After the reading of the minutes, which were approved, the vote was called for on the following resolution, *concerning the election of officers*, presented yesterday evening by Dr. Joseph A. White, of Richmond:

“*Resolved*, That the officers be elected on the second day

of each annual meeting; that they shall be chosen exclusively from among those attending the session, and that the President-elect shall make his appointments for the ensuing year before the session closes."

After a lengthy discussion, notwithstanding the determination yesterday, that further discussion would be out of order, this resolution was laid on the table.

The committee appointed yesterday to express the sense of the Society in reference to the *New York Code*, reported the following resolutions, which were unanimously adopted:

Resolved, That this Society views with concern and deep regret the action of so influential a body as the Medical Society of the State of New York at its last annual meeting, whereby an attempt is made to break down the barriers so wisely erected by the Code of Ethics adopted by the American Medical Association and subscribed to by this Society, between the practitioners of the science of medicine and quacks and charlatans, and desires to express in the most emphatic terms its disapproval and condemnation of that action.

Resolved, That we consider the Code of Ethics of the American Medical Association as the best guide we possess for the conduct of medical practitioners, and hereby reaffirm our adherence to it, and deprecate any change unless it shall be made by the American Medical Association, which body we regard as the representative of scientific medicine in this country.

Resolved, That we approve the action of the American Medical Association, whereby it refused to receive the delegates of the New York State Medical Society.

Dr. Joseph A. White, of Richmond, was then requested to present the **Report on Advances in Ophthalmology, Otology, and Laryngology**. He first considered the most recent advances as to the *histology* of the eye. Contrary to preconceived ideas, the cornea draws its nourishment from the scleral vessels, and discharges its waste products into the anterior chamber. He noted the pathology of sympathetic eye disease and the modes of its transmission into glaucoma, and the method of relief for its different forms, and the connection between intra-cranial disease and optic neuritis. He remarked upon the alarming increase of refractive troubles—especially myopia—in school children, as a subject of great importance. He referred to some necessary legislation regarding the appointment of color-blind engineers, pilots, etc.

Mydriatics were then taken up. For many years *atropia*

has been the sheet-anchor of the oculist. Its chief danger consists in its use in glaucoma and in troubles secondary thereto. *Duboisia* does not dilate the pupil for nearly so long, and cases of glaucomatous symptoms following its use have been reported. In some persons it produces a species of intoxication. Its advantage is that it may be used where there is an idiosyncrasy regarding atropia. He has also used *sulphate of hyoscyamine* and *hydrobromate of homatropine*, especially in refractive troubles, and for ophthalmoscopic diagnosis. *Hyoscyamine* (one-half per cent. solution) paralyzes accommodation very quickly, and its effects pass off sooner than atropia or duboisia; yet it sometimes produces giddiness and a moderate intoxication. *Homatropine* is more evanescent in its effects upon accommodation. Thus far, he has seen no report of glaucomatous trouble following the use of hyoscyamine or homatropine.

Myotics.—Formerly, calabar bean was the only one used. Now we have eserine and pilocarpine. *Eserine* acts more powerfully than pilocarpine. It is used locally in *acute* glaucoma, serpiginous ulcers of the cornea, serous iritis, episcleritis, etc. *Pilocarpine* is used both locally and internally because of its stimulant and absorbent properties. All solutions of these drugs are best preserved by first boiling the solution, and then adding carbolic acid in the proportion of one-half grain to the fluid-ounce.

Iodoform is especially applicable to granular ophthalmia, trachomatous pannus, interstitial keratitis, etc. It has also been used in conjunctival tuberculosis, hypopyon, keratitis, and seems to diminish the purulent secretions.

Boracic acid is used in slight conjunctivitis, in the strength of one to four grains to the ounce of water. He cautioned his hearers against the common use of such astringents as nitrate of silver, lead solutions, etc.

The use of *antiseptics* he considered very troublesome and needless in the after-treatment of cataract. He advised the careful cleansing of the operating instruments and the operator's hands in alcohol.

Optico-ciliary neurotomy was then reviewed in brief. Dr. White insisted that if sensibility in the eyeball returns after the operation, then the eye must be taken out. In this connection, he related the history of a case which was somewhat peculiar because of the amount of hæmorrhage which followed the operation and continued for some time thereafter.

Turning his attention to *Otology*, he first spoke of *purulent diseases of the ear*. The best treatment is an antiseptic, com-

bined or not with a mild astringent. *Boracic acid with zinc oxide or alum* forms a good local application; alum, however, is apt to increase the discharge if there is caries. Then apply a bit of absorbent cotton to exclude air, and keep the parts dry.

When *polypi* are present, alcohol, with or without boracic acid dissolved in it, makes the best application where an operation is not undertaken.

The intimate relationship of ear and throat troubles was remarked upon, and the importance of familiarity with the use of the rhinoscope, laryngoscope, etc., was impressed.

The paper was ordered to be published.

In response to an invitation, Dr. John N. Mackenzie, of Baltimore, Fraternal Delegate from the Medical and Chirurgical Faculty of Maryland, in referring to the report presented by Dr. White, said that the great difference of opinion which prevailed in regard to the cure of *throat consumption* arose from the confusion of two distinct forms of ulceration which are met with in the larynx of the consumptive. The classification into catarrhal and tubercular phthisis held here as in the lungs; and by making such a division, order would be restored to the conflicting opinions of authorities, and a standpoint would be secured for a scientific solution of the various problems which the subject presented, and a guide to prognosis afforded of considerable value to the practical physician. The chronic ulcerative laryngitis of the tubercular patient differed from simple chronic laryngitis in its extreme chronicity, its tendency to relapse, and the frequent occurrence of ulceration which showed no disposition to cicatrize, and, which, if neglected, would eventuate in laryngeal phthisis, although proof of its culmination in tuberculosis was wanting. He believed that the vast majority of reported cases of so-called laryngeal tuberculosis could be referred to the category of catarrhal inflammations. The plan of treating this variety of laryngeal phthisis by thorough local cleansing and disinfection, followed by the direct application of iodoform and morphia to the ulcerated areas, had met with success in his hands; and he considered this method of grappling with the disease as one of the greatest advances which had been made in the control of this troublesome disease. The second form of ulceration—the true tubercular—was much more difficult to deal with; but the fact that pulmonary consumption was curable, the well-known cicatrization of the local lesions of tuberculosis of other organs, as the intestines, and the excellent results which had followed

incisions and drainage of pulmonary cavities, would lead, *à priori*, to the possibility of similar success in the treatment of laryngeal phthisis. The laryngeal ulcer is the pathological analogue of the cavity in the lung; and it, therefore, seemed rational to assume, that what was true of the latter, would be equally applicable to the former, especially as in this case local treatment would be more effectually carried out. Dr. Mackenzie recommended the constant inhalation of medicated vapors as an adjunct to the treatment, and described the methods in general use. He also spoke of a device which he was in the habit of using—namely, the substitution of cotton pellets in the nose for the cumbersome respirators sold in the shops.

Passing, then, to the subject of *nasal catarrh*, Dr. Mackenzie warmly advocated its treatment by surgical methods, especially the removal of the hypertrophied tissues covering the turbinated bones, the excision of the pharyngeal, and, if necessary, the faucial tonsils, and he related cases in support of operative interference. As a substitute for surgical operations for the straightening, perforation, or fracture of the deflected septum, Dr. Mackenzie suggested the removal of one or more of the turbinated bones. He concluded his remarks by cordially thanking the Society for its courteous invitation, and for the attention with which the members had listened to his crude ideas.

Dr. Wm. L. Robinson, of Danville, reported a *Case of Ear Trouble Relieved by Electricity*, which elicited an interesting, but a very latitudinous discussion by several members.

The Early Diagnosis of Phthisis Pulmonalis was the title of a "volunteer paper" by Prof. M. L. James, of the Medical College of Virginia, Richmond. He introduced his paper by referring to the fact, that four years ago he had presented a paper before the Society with the title, "The Question of the Curability of Consumption and its Treatment." In that paper he had shown, from the opinions of eminent lights in medicine, from the facts of pathological anatomy and from his own experience that many cases of consumption were curable. He stated that, in his own experience, however, the cases of cure were limited to two, after the disease had progressed to the establishment of cavities—the cavities in the two cases having been small ones; but as many as twenty-three cases in his private practice, and of which he had kept careful records, had yielded to the force of remedies in earlier stages. Admitting that he was right in his opinions, Dr. James regarded the question of its early diagnosis as

one of the weightiest in Medicine. He conceded that it was not always an easy diagnosis, but for that reason was the more important.

With a brief reference to the pathology of the disease, in which he said the weight of authority established the fact that there was at least a close alliance between true tuberculosis and those chronic inflammations of the lungs which marked the earlier stages of pulmonary consumption, he proceeded to a review of the symptoms and physical signs which marked the earlier stages, in which he claimed that, while there was much of difference in the violence of the symptoms in different cases of the disease, from those overwhelming invasions which destroyed life in a few weeks, to such as were so feeble in their destructive force as to require years for the termination of their mortal work, still in all cases there was distinct evidence of profound constitutional disturbance, and it was practically important to recognize such variations. He laid much stress upon the presence of fever, which he said applied to all of the cases under his observation at some stages of the disease, though, he said, that so eminent an authority as Williams had said, that in a few cases it was absent, and sometimes the temperature was sub-normal. He said, however, that more than any other disease that he had observed attended by febrile phenomena, the exacerbations of the fever were variable, sometimes scarcely departing from the types of the intermittent and remittent forms of malarial fever, while in other cases it would sometimes be absent for several days, or occurring during the day in considerable elevation for so short a period as a half-hour. His description of the type of the fever, as a rule, was variability. He said that the proper recognition of the fever of phthisis could only be made by the thermometer—the surface temperature of the hands and face being entirely fallacious. He thought that every suspected case should be provided with a thermometer and the temperature taken several times in the twenty-four hours, and oftener than the physician in private practice could make observations himself.

He then proceeded to analyze the value of the several symptoms, referring to the presence of the *bacilli*, which Koch claimed would be found in the sputa in the suppurative stages, concluding that unless that could be accepted as established, there was no one pathognomonic symptom or sign; and that that even was delayed beyond the stage when remedial measures were usually efficacious; but that there

was in all cases such an assemblage of symptoms and signs as would justify a positively decisive diagnosis. These, he believed, to be an impairment of general health, varying much, but always profound, attended with more or less acceleration of the pulse, and febrile exacerbation, and emaciation, with physical signs, first indicating pulmonary congestion, and then consolidation, more or less circumscribed and complete, with, at least, occasional crepitant, sub-crepitant or mucous râles, also more or less circumscribed, impaired expansibility of the lungs, etc.—all of which symptoms and signs have been more or less gradually developed, and which have existed for a period longer than two weeks, and have been anticipated by prodromic symptoms of greater or less marked distinctness.

After the reading of this paper, which was partially discussed by some members, the *Committee on Nominations of Officers for the Ensuing Year* presented the following nominations, each of which was confirmed by the Society:

Vice-Presidents.—Drs. Meade C. Kemper, of Goshen; O. H. Baird, of Waverley; Joseph A. White, of Richmond; J. S. Apperson, of Town House; Geo. B. Jennings, of Ruckersville, and J. W. Dillard, of Lynchburg.

Recording Secretary and Treasurer—Dr. Landon B. Edwards, of Richmond.

Corresponding Secretary—Dr. Hugh M. Taylor, of Richmond.

Chairman of Committee on Nominations—Dr. Lewis Wheat, of Richmond.

The members of the Executive and Publication Committees, the same as last year.

The election of President by ballot, resulted in favor of Dr. Wm. D. Cooper, of Morrisville, Fauquier county, Va.

The retiring President, Dr. G. Wm. Semple, was elected an Honorary Fellow of the Society.

Rockbridge Alum Springs, Va., was selected as the *place for the next annual session*. Time of meeting, either the last week in August or the first week in September, 1883, according to the decision of the Executive Committee.

AFTERNOON SESSION.—**Pathology and Treatment of Infantile Pneumonia**, by Dr. Bedford Brown, of Alexandria, was the title of the first paper read, of which the following is an abstract. The lobar and catarrhal forms of pneumonia are the most frequent in infants under a half year of age. The rôle of lobar pneumonia is rather coarser and more on the sub-crepitant order, with less complete dulness on percussion

than in adult pneumonia. Catarrhal pneumonia is the most common form in infants, as well as the most dangerous. The rapid secretion of mucus cuts off proper inhalation, and thus cyanosis occurs. He has seen cases threatened with fatal suffocation in twelve hours. The accumulation of carbonic acid in the blood produces a narcosis that reminds one of opium poisoning. The tendency of this carbonic acid poisoning is also to suppress cough.

The rate of respiration in infantile pneumonia is probably higher than in any other disease—even up to 100 per minute. The *character* of the respiration is therefore very short and quick, and the inhalations enter only a small portion of the air-cells. In the baby with extensive catarrhal pneumonia, the walls around the bases of the lungs do not expand normally, but the muscles of the apex of the chest and those of the back and neck are thrown into extraordinary activity.

The Character of the Cough.—In proportion to the extent and gravity of the lung disease the cough diminishes in frequency and force, and thus declines to aid expectoration. Such a condition needs artificial stimulation of the function of coughing. The agents used are antiseptic, and disinfect the accumulated matter in the bronchial tubes, and excite these tubes to action, and hence the expulsion of the offending cause. Dr. Brown uses, by spray apparatus, three or more times a day, this solution:—

R.—Alcohol.....	.....5j.
Water.....	.....5ij.
Carbolic acid.....	.....5ss.
Bicarbonate of sodium.....	.....5j.
Salicylic acid.....	.....5j.
Chloral hydrate.....	.....℥ss.—M.

The atmosphere surrounding the head, and chest as well, should be charged with the spray whenever necessary to excite cough and expectoration. This has always, in the Doctor's experience, excited cough and expectoration, with improvement in the breathing and complexion—at least for the time being, and in some cases he is sure he has thereby saved life.

Character and Rate of Pulse.—In bad cases the pulse runs up to 200, or even 225 per minute. These high figures of pulse and respiration are never reached in the adult. With this rapid and feeble pulse, each cardiac diastole is so brief and imperfect that very few drops of venous blood are received in the right side of the heart with each pulsation.

Hence the tendency of the blood to accumulate in the venous system, producing cyanosis by carbonic acid poisoning, and narcosis, and other consequent effects. And yet patients have recovered even with a pulse of 200.

Treatment.—Digitalis is the best agent to slow the excitable and feeble heart in infantile pneumonia. It is not so rapid and dangerous as veratrum and aconite, but is just as efficient. Belladonna is a valuable adjuvant to the digitalis. It soothes the irritable condition of the sympathetic system. It also curtails superabundant secretion. This is markedly so in cases of catarrhal pneumonia; but belladonna does not suppress cough. The mild preparations of ammonia are particularly valuable in liquefying viscid mucus and hastening its expulsion. The wine of ipecac should never be dispensed with. It is a potent promoter of expectoration. Ipecac exerts an extended influence over the entire sympathetic and vaso-motor systems, and controls hæmorrhage and regulates secretion. The combination of soda, potash, or ammonia with ipecac—especially with ammonia—constitutes the very best means of assisting the bronchial tubes to expel their contents. Opium, when moist râles are abundant, is inadmissible. In the use of opium we must be guided by the extent of tissue invaded. If extensive, opium must be discarded. Bromides are especially valuable applications for quieting nervous restlessness and for procuring sleep in the class of cases discussed. In lobar pneumonia, when the muco-fibrous tissue is very tenacious, iodides of potassium and ammonium, spirits of ammonia and ipecac are very serviceable.

Dr. J. E. Chancellor, of Charlottesville, reported, in brief, a case which endorsed the views expressed by Dr. Brown.

The *Ex-Presidents* of the Society offered prizes of \$50 for the best surgical essay prepared by any member, and \$50 for the best medical essay.

The subject selected for the surgical prize was **Recent Progress in Abdominal Surgery.**

We make a synopsis of the essay which received this prize, presented by Dr. Hugh M. Taylor, of Richmond, Va. His report embraced a review of the recent advances in ovariectomy, Battey's operation, extirpation of the uterus, spleen, and kidney, resection of the stomach, bladder, and intestines, operations for pelvic and abdominal tumors and abscesses, and last, but by no means least in importance, the writer thought, operative interference in intussusception, occlusion, and cancer of the intestines, and in gunshot and other wounds of the abdomen and abdominal viscera. Prominent among

many who have contributed to the advance of abdominal surgery are mentioned Tait, Thornton, Billroth, Keith, Wells, Sims, and Thomas. In ovariectomy, we find the greatest triumphs in abdominal surgery, and to its successes and teachings is due the present activity in all peritoneal surgery. The writings of Keith, Tait, and Billroth tend to disprove the value of Listerism in peritoneal surgery; while those of Wells, Thornton, Schröder, and others of equal eminence, carry great weight in favor of its use. While not an advocate of Listerism, the writer was forced to recognize it as one of the open questions in surgery. The trio of Keith—care, cleanliness, and drainage—is, in the opinion of the writer, the embodiment of antiseptic abdominal surgery. A wide distinction is drawn between Listerism and antiseptic surgery. The opinion that all good surgery is antiseptic surgery is concurred in. The writer reported two cases of ovariectomy, in which the value of drainage was clearly illustrated. The first was a suppurating dermoid cyst, which was so firmly attached to the right iliac fossa, that a large part of its base had to be left *in situ*. It presented a honey-combed, suppurating mass, and suggested a hopeless prognosis. In spite of the unfavorable outlook, the patient recovered from the operation and went about the house for six or eight months. The unexpected prolongation of life was due to the fact that nature established two outlets for the pus—one along the pedicle and one into some part of the intestinal canal. The second case was an extensively adherent multilocular cyst, and the traumatic injury done in separating them warned the operators to provide for removal of the inflammatory products. This was accomplished by passing a tube through Douglas's cul-de-sac. For the first five or six days, about a pint of bloody serum was drained through the tube each day; the patient continued, however, to do well until, by accident, the tube was pulled out. Immediately before this accident, the prognosis was favorable. Immediately afterwards, the temperature and pulse went up, and the patient showed the distended belly, restless delirium, anxious expression, vomiting, hiccup, and all of the symptoms which note the beginning of the end. Drainage, Dr. Taylor thinks, is indicated whenever any raw surface is left in the peritoneal cavity, as no one can foretell the amount of inflammatory products which circumstances, unfavorable to repair, may make the most trivial wound discharge. The danger incident to the use of carbolic acid in peritoneal surgery was referred to, and a plea for the substitution of chlo-

ral entered. The writer has seen carbolic acid used in peritoneal surgery and a solution of chloral used in the same class of cases, but has failed to appreciate any of the advantages claimed for the former. Chloral, he thinks, provokes and facilitates cicatrization and granulation, opposes the formation and degeneration of pus, and neutralizes or limits the morbid action of all septic poisons. Dr. Taylor, recognizes a field for Battey's operation, but thinks the full limits of its application have not been definitely settled. He has witnessed the effects of this operation by abdominal section in three cases, and while all of them recovered from the operation, the impression has been left that the operation is not free from the dangers common to abdominal surgery.

Nephrectomy, nephrotomy, and nephro-lithotomy, and the conditions which call for these operations, are reviewed at length. One case of pyonephrosis successfully treated by nephrotomy is reported. The case occurred in a young man whose family history showed a marked tendency to nephritic troubles. His father was at the time insane from Bright's disease, and his mother was an imbecile from the same cause, while a brother and the patient himself had been operated upon for stone in the bladder. The pyonephrosis was treated by lumbar section, drainage-tubes, and antiseptic washes. The writer thinks, from a study of the literature upon the subject, that extirpation of the uterus for cancer is entitled to the earnest consideration of even the most conservative surgeon; but until there is unity of opinion concerning operative interference in cancer, there must be diversity of opinion concerning extirpation of the uterus for this malady. Hysterotomy for uterine myoma, fibroma, fibro-cystic, and other uterine tumors which are firmly attached to the uterus, he thinks clearly indicated where life is endangered or rendered unbearable.

Porro's and Müller's modification of the Cæsarean operation are dwelt upon, and the operation, and claims of gastro-elytrotomy, and abdominal, intestinal, and tubal pregnancy, rupture of the uterus, also receive due notice in the report. As a last resort, operative interference in perforation and obstruction of the intestine is urged. The exploits of Billroth, Wölfler, and others in this field of operative surgery are fully brought out. Operative interference for the removal of foreign bodies, for rupture of the bowels from falls, blows, wounds—and especially gunshot wounds—is, the writer thinks, strongly indicated whenever a fatal issue is apprehended. He concludes by insisting that in spite of the

bright outlook for abdominal surgery, we cannot ignore the fact that the course over which the patient has to run after the surgeon has invaded the peritoneal cavity is beset with many dangers. The conditions conducing to a favorable or fatal issue are so evenly balanced that the most trivial factor may determine the result. No surgeon, he thinks, can have seen much of abdominal surgery without learning to appreciate the importance of little details. Moments spent in controlling hæmorrhage, in thoroughly cleansing the peritoneal cavity, and in looking to thorough drainage, are golden moments to the patient. The good resulting from such precautions far outweighs the danger incident to prolonging the operation.

Miscellaneous Business.—After reference of the above essay and the awarding of the prize, on motion of Dr. Benj. Blackford, of Lynchburg, it was

“*Resolved*, That hereafter, the Committee on Nominations of Officers shall be empowered to submit the nomination of a Fellow for President, together with the other annually elective officers of the Society.”

EVENING SESSION.—On nomination, Dr. J. E. Chancellor, of Charlottesville, was elected to deliver the *Annual Address to the Public and Profession* next year.

Alcohol—Its Use and Effects as a Beverage and Medicine, was the subject for the Ex-Presidents' *medical prize*.

Dr. John F. Winn, of Richmond, read the first of the medical essays in competition. He gave the history of stimulants as phlogistics and antiphlogistics, passing rapidly from the earliest stages, up to Broussaism, and then to Todd's views. He remarked upon the rapid advance made by the profession since that day, both by clinical experience and physiological experiment, and quoted the resolution adopted by the American Medical Association in 1878. He estimates the annual amount of spirituous liquors drunk in the United States, to be about 220,000,000 gallons. He next considered the use of alcoholics as beverages.

As to the *primary action* of alcohol, it passes rapidly into the blood, altering the form of the red corpuscles, and causes them to adhere in rolls, and thus destroy their vitality; and by its affinity for water prevents or produces coagulation of the fibrine. Paralysis of the vaso-motor nerves is the next result leading to congestion, which is the first stage of acute alcoholism; the second stage is excitement and exhaustion of the spinal cord, with want of co-ordination of the muscular system; the third, a stage of unbalanced reasoning and voli-

tional power; and lastly, a stage of complete collapse of nervous power.

With respect to the *food* value of alcohol, he stated at length the views of its advocates as well as of its opponents. It is conceded that the temperature is reduced and the elimination of carbonic acid is diminished; and the weight of authority seems to warrant the assertion that these results are due to the power that alcohol has in delaying metamorphosis of tissue, and that this delay in tissue-change is caused by the oxidation of alcohol into aldehyde and acetic acid at the expense of the oxygen which should be applied to the natural heating of the body.

Dr. Winn classified its *secondary* effects into four degrees:

First, The *mechanical* effects, due to arterial relaxation, generally exhibited about the age of 25 or 30, in cardiac hypertrophy and arterial degeneration; in that well-known sclerosis and production of adventitious connective tissue in the various organs of the body.

Second degree is marked by those mental phenomena showing the deleterious influence of alcohol on the cerebral centres, generally indicated by loss of memory and speech.

Third degree marks that stage of insatiable craving for liquor (dipsomania), and those periodic forms of inebriety known as mania-a-potu.

Fourth degree. Here the most solemn fact of these mental and moral obliquities is shown in the progeny of the inebriate, in the form of idiocy, epilepsy, and insanity.

As to its use and effects *as a medicine*, the therapeutical application of alcohol is so narrowed that it can hardly be called more than a general stimulant. It is not a *direct* cardiac stimulant, but its effects are obtained indirectly through its paralysis of the "organic nervous chain" giving the heart's action increased frequency, but "a weakened recoil stroke." Its physiological action does not warrant its employment in the treatment of hæmorrhage, unless life is imminently threatened. As a simple antipyretic, it is very inefficient, and should be combined with other antipyretic agents. Its physiological action and clinical experience suggest its use when the heart's action is weak and rapid, the skin and tongue being at the same time dry and harsh. Delirium does not always contra-indicate its use. Congestion or inflammation of the liver or kidneys requires it to be given with great caution. As to dose, the effect produced is the best guide. As a rule, from four to eight ounces of brandy in the twenty-four hours will suffice. He would

recommend the general rule laid down by Sir William Jenner and Prof. Loomis—never give stimulants indiscriminately; when in doubt as to giving or withholding stimulants, it is safer to withhold them; when given, watch carefully the effect of the first few doses.

Whether or not alcohol in diphtheria is an "antiseptic" or an "antidote" in the strict sense of these terms, as stated by M. Sauné and Dr. Chapman, there is a diversity of opinion; but clinical experience shows it to be absolutely essential.

In referring to its employment in phthisis, Drs. N. S. Davis and Austin Flint, Sr., are of opinion that alcohol exerts no prophylactic power. The former also believes that alcohol does not retard the development of the disease; while the latter has recorded the history of sixty two cases of arrested tuberculosis. In nine cases, recovery was apparently complete.

In phthisis, if the effect of administration be that of a cordial, good may be expected from its use; if the effect be discomfort, alcohol will be a disadvantage.

In conclusion, Dr. Winn alluded to the injustice oftentimes heaped upon the medical man for being accessory to the perverted habits of some of the unfortunates, and he would insist that physicians be more guarded in their advice as to the use of alcoholic liquors; and when, in their good judgment, they are indicated, prescribe them as definitely as to time and dose as ether or chloroform, or any other agent.

Dr. M. G. Ellzey, of Washington, D. C., next read his essay on the same subject. As a beverage he discussed the effects of a moderate use of alcohol upon persons in health; first in creating a new physiological want, which is not a mere taste, but a systematic demand, peremptory, irresistible, and hereditary. Full statistics fortified this position. When the indulgence is carried to drunkenness, then we meet the deadliest evil of modern times. Dr. Ellzey then passed on to discuss the *Physiological Action of Alcohol*, mentioning well-known facts. He thought that pure old rye whiskey is less dangerous than other whiskeys, or French brandy. The adulterations of beer make it likewise dangerous. All stimulation is temporary, and is followed by languor and depression. Referring to Dr. Hammond's experiments, Dr. Ellzey concluded that alcohol may temporarily and successfully supplement deficient food supply without bad consequences; but if the food supply is sufficient, then, even in small quantities will alcohol be followed by unpleasant effects. It should be

used only in temporary emergencies or wasting disease. While it is established that some is eliminated undecomposed, the greater part is oxidized in the system. Dr. Ellzey then cited instances of the depressing and exhausting effects of whiskey upon laborers in harvest fields, upon soldiers, arctic explorers, etc.

The Use and Effects of Alcohol as a Medicine were next pointed out. Its advantage to the military surgeon in the field could not be over estimated. In all cases of formidable surgical shock, in many severe and malignant diseases, in cases of venomous snake bites, etc., the advantage of alcohol in destroying micrococci and bacteria, etc., its value in supplying tissue-waste in typhoid fever, consumption, etc., are clearly pointed out. Especially in the last-named disease does Dr. Ellzey think *old rye* whiskey of great value—even more valuable than cod-liver oil, and the phosphorous compounds. The great need in such morbid conditions as this, in typhoid fever and other diseases, is *food*. Alcohol, properly used, is a food, and has this advantage, that *it enters the circulation without digestion*. Carbo-hydrates are nutritious only after some chemico-vital changes—all of which processes task the already insufficient supply of vital energy. "But alcohol takes a direct road to the circulation, taxing none of the vital organs, but rather giving a fillip to these energies, *en passant* ; and once in the circulation, it enters forthwith upon its usefulness, suffering oxidation and liberating heat and other forms of energy, *pro re nata*. It ought always to be judiciously prescribed and used.

The anæsthetic effect of alcohol was remarked upon. As such it is useful in hysteria, and allied complaints. Especially in tetanus may we obtain great advantage from it. In some forms of dysmenorrhœa whiskey is of great value.

In view of the hereditary tendency of inebriety, physicians should always be cautious as to whom they administer alcohol.

Dr. Ellzey conceives it to be foreign to the purpose of the essay to discuss the evils of drunkenness. Neither did he attempt to exhaust the therapeutical uses of alcohol.

The facts related by the author "constitute alcohol the greatest of physiological luxuries—a *magnum bonum Dei* in its skilful, scientific, and legitimate use ; but in its *abuse*, a destructive and terrible agent, Satanic in its far-reaching, all-pervading power for mischief."

Dr. Frederick Horner, of Marshall, Va., as a contestant for the prize, read the third and last of the essays on the same subject. After defining alcohol—stating briefly its

preparation, physical qualities, chemistry, history, etc.—he related some instances of its fatal toxicological effects. He spoke of the visceral and cerebral effects of the drug, and the pathological appearances which simulate those of inflammation and softening of the mucous membrane of the stomach, with cerebral congestion and sanguineous or serous extravasation in the brain and lungs. The blood is less coagulable, due to the destruction of fibrine. The improper continuous use of alcohol leads to insanity.

As a beverage, the appetite is generally acquired. As an illustration of the possible hereditary effect of habitual drunkenness, he instanced the case of a boy, 15 years old, arrested in New York for drunkenness. But he was not drunk, nor had he been drinking. He had never been able to walk without staggering. His speech was that of a person intoxicated, and, when excited, he would mutter and reel. But he was the son of an inebriate father. He referred to the annual amount of tax and revenue from alcoholic beverages for 1880, and stated that \$760,000,000 were expended for such beverages in the United States annually. He pointed out the fearful amount of crime that seems to result from the traffic, and the great additional expense to corporations caused thereby.

As a medicine, alcohol, in small quantities, as a cardiac and brain stimulant has always been conceded to be useful in adynamic conditions, such as typhus and typhoid fevers, puerperal septicæmia, consumption, diphtheria, after sudden and large hæmorrhages, functional gastrodynia, some forms of sea-sickness, some female nervous disorders, etc. For fevers, wine is preferable. Brandy or whiskey is better for blood-poisoning; and lager beer is useful when the nervous and visceral systems are implicated, etc.

In many instances alcohol exerts a pernicious influence on the heart. Alterations in the structure of the blood-vessels sometimes occur. Sometimes the heart's action is quickened, and the blood driven, therefore, more forcibly to the brain. Hence increased danger of cerebral hæmorrhage.

Delirium is an example of the toxic effects of alcohol. The habitual use of alcoholics by young persons tends to diseases of the kidneys and liver. In confirmed inebriates, the organs are destroyed. Thus the origin of alcoholic phthisis, fatty degeneration and cirrhosis of the liver, cerebral, spinal, heart, and other diseases.

He closed by an appeal to the profession to be cautious how they administer the drug. "Striving to better, oft we mar what's good."

Award of the Prize.—The first ballot as to the superiority of one of these three essays over the others gave a majority vote to neither of the contestants. Many members who had not heard the full reading of the three essays declined to vote at all. The second ballot resulted as follows: Dr. Ellzey, 14; Dr. Winn, 13.

The prize was accordingly awarded to Dr. Ellzey.

THIRD DAY—MORNING SESSION, Sept. 15th.—**The Treasurer's Report** was presented, showing receipts of \$720, and expenditures of \$713.59, leaving a balance of \$6.41 in the hands of the Treasurer, with the Society out of debt. At a later hour, the Auditing Committee reported that the accounts were correct.

Abnormal Menstruation was announced as the subject selected for general discussion.

Dr. Samuel K. Jackson, of Norfolk, was called on to read a paper which he had prepared, and which bore on the subject named. In response, he reported **Some Cases of Hystero-Epilepsy and Hystero-Catalepsy**. His paper consisted mostly in a detail of cases, with remarks suggested by them. The *first* case was that of a girl, in humble life, aged nineteen. The Doctor found her, five months after the attack began, lying on her back, her head slightly elevated, eyes fixed, complete paraplegia, and probably anæsthesia of the lower limbs, with perfect rigidity of these, and partially of the upper. When she attempted to move her arms, violent and rapid vibrations would occur, the arms being at right-angles to the body. She made her wants known only by "grunts." She could not flex her fingers. Some four or five years previously, she was in the habit of jumping off a high porch. One day, she and a companion spent the whole day in this amusement. That afternoon, she had a "fit," which lasted some hours. The fits recurred frequently—especially during her menstrual periods. This state culminated in cataleptic attacks. Dr. Jackson made a vaginal examination. There was retroflexio-uteri. Not being prepared to enter at the time upon proper treatment, the Doctor simply elevated the retroverted fundus. Partial relief resulted. At his next visit, the patient was sitting up. She slowly recovered, until she was able to walk on the street.

Case II.—Woman, aged twenty-two, shirt-maker, stout, active and strong; used *heavy* sewing machine. She had had menstrual "irregularities" often. On one menstrual occasion, a cataleptic attack occurred, which remained four weeks, until her subsequent menstruation. Then she was

well for four weeks. She now failed to menstruate, and the same cataleptic condition recurred. Later, the flow became regular, and she is perfectly well. In pointing out the peculiarities of this case, Dr. Jackson called special attention to the fact that, when she was not disturbed, she remained perfectly motionless; there was, also, complete hemi-anæsthesia of the right side, with exalted sensibility of the left side.

Case III.—April, 1879. Girl, aged eighteen years. She was easily excited, and slept but little. Menstruation was deficient, with "irregularity." Much mental perturbation, on account of association with an insane girl, after the patient went to school-teaching. She developed clonic spasms, commencing with a tremulous agitation of the arms—increasing to jerking. Dread of apprehending the lunatic or idiot, above referred to, would greatly frighten her. Such an attack would sometimes end suddenly, and at others she would remain in a cataleptic condition. A curious hoarse barking cough almost always followed these attacks. This cough gradually became relieved.

Case IV.—Miss —, aged fifteen, suffering pains and "nervous tremblings" in both arms, with a sensation as if being "unhooked." Her mother thought she over-studied, but such does not seem to have been the fact. She fell into a profound sleep and so remained for four weeks—the only apparent act of consciousness being that of swallowing after much shaking and slapping. Then imperfect menstruation commenced, during which she opened her eyes; but this was followed by another four weeks of catalepsy, with her eyes wide open. After the subsequent monthly period, there was occasional opening of her eyes, but nothing could arouse her. This condition lasted five months. There was almost total anæsthesia of the whole body with loss of will-power. After the fifth month, she recovered, and became more sprightly than before her attack. The cause of the trouble was very obscure—the deficient menstruation being the only abnormal condition observed. The uterus was normal in size and position; but there was a bend of the sacrum about midway in its length, nearly at right-angles, due to a fall in early life. Probably the sacral nerves were pressed upon by the engorged uterus during her monthly period, but no examination proved this to be a fact.

Case V.—Miss—, age 15, sprightly; in April, 1882, had a chill, and another May 4th. She began to jerk and jump. A neighboring doctor pronounced the attacks hysterical. The spells at first lasted from 10 to 20 minutes, but the du-

ration soon increased from two to four hours, and they were so violent as to require three or four men to hold her to prevent personal injury. She would sometimes throw her head back between her shoulders, with her face flat on the bed, and throw her feet back over the head. It was impossible to straighten her. These attacks recurred until the last of June. She began then to go off suddenly into unconscious states, when all at once she would commence laughing and talking to imaginary persons. Sometimes nothing could arouse her—not even the firing of a cannon nor deafening peals of thunder. At other times she could hear the faintest whisper. About June 1st, she came under Dr. Jackson's observation. There had been complete amenorrhœa for two months. Agents used for the relief of this condition mitigated the paroxysms and an entirely favorable change in her condition resulted until August 20th. Since then, there have been strange periods of double consciousness, with cataleptic attacks of from half an hour to two or three hours in duration. In these attacks she would talk as though in company with distant friends and would tell where they were and what they were doing; and, strange to say, letters received by the family from the parties verified her accounts. A number of instances were related where her statements as to distant persons and things proved entirely correct. There is great hyperæsthesia of the optic nerve. She is still under treatment and is improving.

Dr. J. E. Chancellor, of Charlottesville, followed with a paper on

Abnormal Menstruation—After defining menorrhagia and metrorrhagia, he said he had met with these forms of abnormal menstruation more frequently than any other. General plethora, certain climates and habits of life, chronic metritis, chronic degeneration, fibrous tumors, polypi, fungous affections of the womb, retained products of conception, subinvolution, displacements of the uterus, were among the more prominent causes named. As regards displacements, Dr. Chancellor thinks "when retroflexion gives rise to a diminished menstrual flow, we have the attending chronic inflammation, with hypertrophy; and when retroflexion is attended by menorrhagia or increased flow, we have subinvolution of the organ." He laid special stress upon subinvolution as a cause of abnormalities.

Treatment consists in quiet, cool apartments, hard bed, iced acidulated drinks, cloths wrung out of cold water applied over the vulva, anus, and thighs, elevating foot of bed,

judicious use of hæmostatics—such as ergot, gallic acid, cannabis Indica, etc. In more serious cases, tampon the vagina with a bag of powdered alum, or apply tannic acid to the os; or, after dilatation of the os with tents, hot water may be applied with a sponge; or then tincture of iodine may be used, or even, if necessary, one part of solution of persulphate of iron, diluted with two parts of water. Of course here and there the curette may be demanded. He closed his paper with the report of a case of metrorrhagia, in which the curette saved the life of the wife of a member of the Society.

A general discussion followed, but it took such wide latitude that it would be impossible to do justice to the speakers, without reporting in full their remarks.

Diphtheria was selected as the subject for discussion at the next annual session, and the Society, after adopting the usual resolutions of thanks, adjourned *sine die*.

American Pharmaceutical Association.

[Special Correspondence to *Virginia Medical Monthly*.]

The Thirtieth Annual Meeting of the American Pharmaceutical Association convened at Niagara Falls, N. Y., on Tuesday, the 12th of September, 1882, and adjourned to-day (September 15th) at 1 P. M. The meeting has been one of the largest and most successful which the Association has ever held. Including about 100 ladies, there were 550 in attendance. The meeting was called to order by the President, Prof. P. W. Bedford of New York city. After the usual preliminaries, such as appointing a Committee on Credentials, etc., the President delivered his annual address, which was, as might be expected of one with his accomplishments and experience, both interesting and instructive. He first gave a brief sketch of the early history of the Association, from its inception in 1851, when an initiative meeting of nine members met in the rooms of the Philadelphia College of Pharmacy to discuss the expediency of a proposition to organize such an Association, and traced its development and growth up to the present time. He dwelt upon the scientific work it had accomplished, and paid merited compliments to many of its members who had distinguished themselves by their labors in the field of scientific discovery within the scope of chemical and pharmaceutical investigation. He alluded to the fact that fifteen States now have pharmacy laws in operation, which placed wholesome re-

strictions upon the dispensing of drugs and medicines by incompetent persons, and require an examination before a Board of Pharmacists, or else a diploma from a college of pharmacy, and that several other States are now endeavoring to procure similar reforms. He reviewed the system of education pursued in the colleges of pharmacy in this country, and compared it with that of Great Britain, thus showing that our system was the most successful. As he is an experienced teacher, and has been for some years Professor of Pharmacy in the New York College of Pharmacy, he was enabled to make some valuable suggestions in that direction. But his address was too long for me to notice more than the salient points of it without occupying too much of your valuable space.

At the second session, which was opened the next morning at 9 o'clock, the Nominating Committee made their report of nominations for offices for the ensuing year with the following result:

President—Chas. A. Heinitsh, of Lancaster, Pa.

Vice-Presidents—John Ingalls, of Macon, Georgia; Louis Dohme, of Baltimore; Wm. B. Blanding, of Providence, R. I.

Treasurer—Chas. A. Tufts, of Dover, N. H.

Secretary—Prof. John M. Maisch, of Philadelphia, Pa.

Reporter on the Progress of Pharmacy—Prof. C. Lewis Diehle, of Louisville, Ky.

They were unanimously elected.

The Chairman of the Committee on the State of the Drug Market made a very interesting report, showing that in the past few years there has been a marked improvement in the quality of drugs and chemicals, and that importations from abroad have been characterized by a much higher standard. This, he thinks, is largely due to the spread of knowledge from our colleges of pharmacy, and the more general spread of pharmaceutical literature, and is likely to continue until the best and purest grades of drugs and medicines only will be considered worthy of place on the shelves of the Pharmacist.

At the Thursday morning's session, Prof. Saunders, of Ontario, who is an Ex-President of the Association, introduced Prof. Wm. B. Carpenter, of England, who is known to science as a physiologist and microscopist of the first rank, and has had much to do with deep sea soundings. Dr. Carpenter thanked the Association for their cordial reception. He congratulated the members on the progress of pharmacy in this country, and was glad to see that they

looked upon their profession as something more than a mere pecuniary enterprize. He gave a short sketch of the progress of microscopy in England and America, coupled with excellent hints on the selection of a microscope for practical scientific research. He closed with cordial wishes for the continued prosperity of the American Pharmaceutical Association.

The usual number of essays and scientific papers were read at the last two sessions, and 122 new members were elected.

In accordance with the report of the committee on the next place of meeting, it was decided to meet next year on the second Tuesday in September in the city of Washington.

A lively discussion originated at the second session, caused by a delegation from the Western Wholesale Druggists' Association having presented credentials. It was finally decided that as this was purely a scientific Association, and theirs a Trade Association, they could not be permitted as delegates, but were cordially invited to seats and a participation in the discussions.

Mr. Richardson, of St. Louis, the chairman of the delegation, made a speech accepting the situation.

On Friday, at noon, after passing the usual resolutions of thanks, etc., the convention adjourned *sine die*. "Auld Lang Syne" was sung by the whole Association, and leave-taking was next in order.

Exhibition.—As is always customary on such occasions, a grand exhibition of drugs, medicines, chemicals, perfumery, toilet articles, apparatus, and everything pertaining to the drug business, was held in the pavillion in Prospect Park. I can only say that the display was gorgeous, and have not space to enumerate.

The Randolph Box Company, of Richmond, Va., was well represented, in charge of Mr. N. V. Randolph, and their exhibits were much admired. I saw Mr. Randolph busy taking orders for goods.

Entertainments.—The Committee on Entertainment, Mr. George J. Seabury, chairman, deserve much praise for their energy and untiring efforts in carrying out their programme. They had procured the services of a fine band and orchestra from Buffalo, N. Y., which gave concerts. On the second evening there was a grand ball, which was highly enjoyed by all who were fond of dancing, and on the third evening a grand banquet was given in the large dining-room of the Cataract House, when short speeches were made by those who had been selected to reply to toasts.

Every evening, from eight until ten o'clock, the Falls were illuminated with the electric light, the effect of which was very fine. B.

Book Notices, &c.

Handbook of Uterine Therapeutics and of Diseases of Women. By EDWARD JOHN TILT, M. D., Past President Obstetrical Society of London, etc. Fourth Edition. New York: Wm. Wood & Co. 1881. 8vo. Pp. 328. (For sale by Messrs. West, Johnston & Co., Richmond.)

All of Dr. Tilt's publications relating to diseases of women and their treatment have, for many years, been considered authoritative. Hence the popularity of his works, and the rapid demand for successive editions of his books which bear on female diseases. He is a close student of his cases, and his conclusions are generally well approved. He also makes himself familiar with the results of the observations of other eminent authorities. The whole gist of the present work may be briefly summed up in the following quotation from the author himself:—"Three therapeutical teachings are now striving for mastery over the medical mind. One trusts entirely to medicine, and strongly deprecates the treating of diseases of women by surgical measures. Another puts little or no trust in medicine, and represents the knife as the sure and safe mode of curing most diseases of women; while a third, considers uterine orthopedy as the key-stone of uterine therapeutics." Dr. Tilt combats these exaggerations, and seeks to determine the application of his remedies "by determining the proper scope and the relative value of drugs, of the knife and of pessaries in the treatment of disease." He sums up his principles of practice by first calling special attention to the importance of hygiene; then use such remedies as are known to modify constitutional taints—if any such exist; then he calls attention to the possibility of cure of most female diseases, without resort to surgery, "by the better application of old familiar remedies and sound hygiene;" and, lastly, he mentions "the utter impossibility of curing aggravated forms of the most common uterine affections, unless surgery be combined with medicine and hygiene." This very condensed summary represents the true tone of the book now before us, and which we regard as one of the ablest of the many valuable works by eminent and worthy authors on the subject at the present day. Its

teachings should be universally studied, and we are sure if the cautions given are duly heeded, many valuable lessons of a practical kind will be learned by most practitioners. The work, while not a complete treatise on diseases of women, is so full of *general* suggestions that are every day needed by the ordinary run of doctors who undertake the treatment of female diseases, that we most unreservedly recommend it as an addition to the library of every practitioner.

Essentials of Vaccination: A Compilation of Facts Relating to Vaccine Inoculation and its Influence in the Prevention of Small-pox. By W. A. HARDAWAY, M. D., Professor of Diseases of the Skin in the Post-Graduate Faculty of the Missouri Medical College, etc. Chicago: Jansen, McClurg & Co. 1882. 12mo. Pp. 146. Cloth. Price \$1. (By mail from Publishers.)

The author starts off with a history of vaccination, devotes a few pages to variola in animals, and after speaking of the nature of vaccinia, he describes vaccinia in the human subject. The abnormal modifications and complications of vaccinia and the importance of revaccination are pointed out. He then passes to a discussion of the merits of different kinds of vaccine virus, and the best methods of obtaining and storing the same. After giving valuable instructions as to the operation of vaccinating, how the effects should be watched, etc., he closes with an examination of the objections urged by some to vaccination. Such is the general outline of the book before us. As to its fair statement of facts, so far as yet gathered, both for and against the practice of vaccination, no one who reads the book will deny. And as a result of such overwhelming facts as are altogether in favor of the original operation, as well as of re-vaccination, the author very properly and earnestly advocates the practice. He prefers animal vaccine rather than the humanized. The book is one of much merit and will prove very useful to every attentive reader of its pages.

Since it so frequently happens that Boards of Health—especially in our large cities—appoint young or inexperienced physicians as public vaccinators, it would be doing a general good to require examinations of such parties concerning the “essentials” as set forth in a book like this. Let this book be furnished by the Boards to each vaccinator as his guide-book. The expense would not be over \$15 or \$25 for a city with a population of 70,000 or 75,000, as in this city. With such information as this book gives, these public vaccinators would be able to give much information to the humbler

classes of society who mostly avail themselves of the services of the city vaccinators; and that information being, in the main, derived by each doctor from the same source, would be more uniform, and thus more strongly impress the minds of the public at large. The day would soon come when, either there would be no need for "compulsory vaccination" legislation, or else, if such a necessity should arise, there would be but a feeble resistance to the execution of the law.

Syphilis. By V. CORNIL, Professor in the Faculty of Medicine of Paris, etc. Translated with Notes and Additions, by J. HENRY C. SIMES, M. D., Demonstrator of Pathological Histology, Univ. Pennsylvania, etc.; and J. WILLIAM WHITE, M. D., Lecturer on Venereal Diseases, Univ. Pennsylvania, etc. With 84 Illustrations. Henry C. Lea's Son & Co. 1882. 8vo. Pp. 461. (For sale by Messrs. West, Johnston & Co., Richmond.)

After an attentive reading of this book, so far as the original work of Prof. Cornil is concerned, we are fully persuaded, as the author claims, that "these lectures may, therefore, be said to be an elementary manual of syphilis, based upon a minute knowledge of anatomy." The American Editors have done much, by their interpolations, etc., to make the work more valuable to *practitioners* than was the original design of the author; but even with all of these notes and additions, it does not seem even to have been their intention to do more than to furnish a treatise which *supplements*—not to supplant the excellent practical works now published. While here and there are stated many important facts, which the practitioner should know, still the book treats mostly of the histological evolution of the various lesions of syphilis—"from the initial chancre to the gumma." For the purely scientific student, there is no work which is the equal in value of this one—so long as their study is directed towards matters relating to the minute anatomy of syphilis. Of course, also, specialists should have the work, and professors, lecturers and other teachers cannot well get along without it; for each of these classes of persons should know more than they have the opportunity to teach to term students.

At Fort Worth, Texas, an irregular practitioner made a diagnosis of "erysipelas from the toes to the knees; measles from the knees to the waist, and seven-years itch from the waist to the top of the head." In consequence, a number of the curious contracted small pox.—*Western Lancet*, Aug. 1882.

Editorial.

New York Post-Graduate Medical College.—We have more than once pointed to the importance of such a school, not only for the profit of the late graduate, but for the older practitioner, and especially for the doctor who does not keep the run of medical advances by the careful reading of more than one medical journal. Such centres as New York, St. Louis, London, Paris and Vienna present peculiar advantages for the working vacation of a busy practitioner, who may wish, in a few weeks, to catch up with the times, and become familiar with the progress made in medical science since he took his degree. The New York Post-Graduate School possesses peculiar advantages for meeting such a purpose. Its faculty embraces many of the most successful and distinguished physicians and surgeons of America, and the schedule of instruction is admirably adapted to suit the conveniences of the busiest practitioner. We would call the special attention of all physicians interested to the advertisement of this school, which appears in the proper department of this issue.

Medical Society of Virginia.—We do not know that the Society ever had a more harmonious and profitable session than that recently adjourned, and which convened at the Fauquier White Sulphur Springs, September 13th. The attendance was good—about fifty—although the time lost, and the inconvenience in getting to the Springs by reason of want of connection of trains, and the frequent change of cars, was very great. For instance, passengers from this city, going by the most direct route—*via* Gordonsville—have to remain at that depot five hours. Then, again, at Orange Courthouse, change cars; at Warrenton Junction, change cars again for Warrenton; and at this latter place, change to stages for the Springs, some ten miles off—all of this to travel a distance from Richmond of about 130 or 140 miles. But the attention given by the proprietor of the Springs and his clerks to the entertainment of his guests, more than compensated for every inconvenience.

The *Medical News*, of Philadelphia, has in its issues of September 23d and 30th, respectively, made such full and accurate reports, through a special reporter, that we have adopted them in full. Whoever reads these reports will be struck with the amount of work done and with its great value to the profession at large.

The Committee on Publications has again decided to publish the volume of *Transactions*, as usual since 1874, in connection with the *Virginia Medical Monthly*. As the meeting of the Committee was held just as we were going to press, we have neither time nor space for further details; these will be more fully stated in our November number.

Physician's Property and Practice for Sale.—Dr. George B. Jennings, of Ruckersville, Greene county, Va., on account of bad health which compels him to retire from practice, proposes to sell to the highest bidder his lot of six acres of land, with a dwelling of six rooms, a physician's office, and other necessary buildings. The Doctor's annual practice amounted to from \$3,000 to \$4,000 annually. Terms of sale on Tuesday, October 10th, 1882, one-third cash; the balance in two equal annual payments with interest from date of sale.

Dentistry.—The President of the Indiana State Dental Association, Dr. Fuller, in his recent address, dates dentistry back to the "Egyptian mummy period." He says, Herodotus, 484 B. C., knew something of dentistry. (We do not know.) The first dentist in this country was Joseph Flagg, who practised in Rhode Island. (J. Foster Flagg must be a lineal descendant.) In 1820 there were one hundred dentists in this country; now it is estimated that we have thirteen thousand; and that they use half a ton of gold and one hundred thousand dollars worth of cheaper material, annually. There are made also every year three million artificial teeth, mounted on the various bases.—*Southern Dental Journal*, Sept. 1882.

Alumni of the Medical College of Virginia are requested to communicate to the Dean their addresses. It is pleasant to the Faculty occasionally in some form to exchange greetings, and since in many instances there have been changes in residence, the addresses of all are not known. It would be gratifying, too, in all instances to receive copies of the contributions of the Alumni to the literature of the profession for the College library.

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Original Communications.

ART. I.—**Typhoid Fever.** By R. B. STOVER, M. D., Richmond, Va.
(Read before the Richmond Medical and Surgical Society, August, 1882.)

It is true that we find among the writings of Hypocrates, and other Greek and Roman physicians, a history of different pathological conditions under the title of "typhus," but it is doubtful if typhoid fever was recognized by them—most assuredly not as we understand it, through its anatomical lesions and etiological bearings. Indeed, not until 1830 did pathological anatomists make any reasonable effort to differentiate, in a scientific manner, between the different pathological conditions which, up to that time, had been classed in nosology as "typhus."

To Sir William Jenner, of England, and Griesinger, of Germany, are we indebted for pointing out the path in which pathologists must travel to reach practical light on this subject. Sir William Jenner was the first to point out the fact that the poison of typhoid fever was different from that of typhus; and that the one could not follow exposure to the contagion of the other. The real difference between typhus and typhoid fever is that typhus is contagious, while typhoid belongs to the miasmatic contagious diseases, which is a contingent contagion. The one is transmitted direct, by per-

sonal contact; the other is never so transmitted, but is in the air we breathe and the water we drink. The one can reproduce itself, and indefinitely, while the other requires influences other than those of the specific poison which is given off from the body of a person sick with the disease.

There is also a third class of fevers which we will do well to study in connection with those already mentioned, from the fact that we must differentiate between them and typhoid fever, as well as between typhoid and typhus fevers. I refer to malarial fevers. To the first class, or that of contagious fevers, belong typhus fever, small-pox, measles, relapsing and scarlet fevers. To the second class, or that of miasmatic contagious diseases, belong typhoid fever, yellow fever, dysentery and cholera; while in the third class, or that of malarial diseases, belong intermittent, remittent, continued and typho-malarial fevers.

We have no history as to when typhoid fever first made its appearance. Among the writings of the physicians of the seventeenth century we find tolerably accurate descriptions of the disease. Such were given by Spigelius, Baglivi and Lancisi, in Italy; by Willis and Sydenham, in England; and by Hoffman, in Germany. In the eighteenth century, however, its existence was positively proven by Morgagni.

The theory that is taught in the present day by Jenner, of England; Liebermiester, of Germany; Trousseau, of France, and Loomis, of this country, as to its infection, is that the poison of typhoid fever is harmless unless it undergoes some change outside of the body, and that this change is effected by the poison coming in contact with vegetable and animal matter in a state of decomposition; that this typhoid poison does not originate in the decomposition of such substances, but finds in them a favorable soil for its growth and propagation. They say that typhoid fever never appears in any locality previously free from it, unless a case be brought there; and medical literature is full of examples sustaining the assertion. They further teach that, in the excrements alone of typhoid fever patients, is to be found the specific poison of the disease; but that these while fresh, do not contain it. In order that the poison may become active,

it must undergo some change after evacuation. This change may take place, if these excreta are left to themselves; but the poison is more active if the dejections are collected in privies or sewers. In this way can be explained how it is that one person, suffering with this disease, may become a focus of infection to others.

We cannot answer in what way the poison enters the system in all cases, but in some we can demonstrate by observation that infection takes place by the air we breathe or the water or milk we drink. It is probable that the poison, in minute particles, is suspended in the atmosphere, and that it may pass through the lungs into the blood, or that, through the pharynx, it may enter the alimentary canal. It may also be ingested through drinking fluids, as water or milk. For instance, where wells or cisterns are in close proximity to water closets and privies, we can detect in the water, by chemical analysis and the microscope, substances which can come only from the privies and water closets.

Now, if the dejections of typhoid fever patients be the carriers of the poison, and such dejections be thrown into these privies, it is plain how water, furnished from such sources, when drunk, will produce infection. It is also plain that if this contaminated water be mixed with milk, the milk when drunk will be a source of infection. The proof of this source of infection is further shown by the fact that, if such supplies of water be closed up, and the water furnished from some other source that has not been contaminated, the spread of the disease that had been prevailing will at once cease.

It is worthy of remark, that cisterns and wells whose water for years has been contaminated by leakage from water closets, but used with impunity, that when dejections from typhoid fever patients have been emptied into the privies which have been the source of leakage, the water afterwards, when drunk, will produce in the person so using it typhoid fever; and, also, it is worth while to mention, that by boiling this water it becomes innoxious. Again, such a source of water supply is frequently the starting point for a severe epidemic of typhoid fever.

From what has been said, it will be inferred that the cause of every epidemic, and of every isolated case of typhoid fever, is a specific poison, derived from some other case of that disease; that all the conditions of decomposition of vegetable and animal matter, sewer gas and sewerage from privies without the specific poison of typhoid fever, will not produce that disease, and that it is a disease that spreads in proportion to the extent that the inhabitants breathe or drink the contents of their privies or water closets.

We meet many difficulties in writing the symptomatology of typhoid fever. The febrile phenomenon, however, is the symptom that first claims our attention; and that will best determine the diagnosis, prognosis and treatment. This symptom has been studied with critical accuracy by Sir William Jenner, of England, Seguin and Loomis, of New York, and by Wunderlick, of Germany.

This fever has separate periods, with well-defined duration and course, which, when comprehended and observed, will be sufficient for the purpose above mentioned. The natural duration of this fever is four weeks, and it may be divided into four separate periods, each of which is marked by a characteristic degree of fever, which continues from five to nine days, and is capable of clinical demonstration, if not interrupted by complications or treatment. In the first period of seven days, there is a steady increase of the fever, beginning on the morning of the first day, at normal, and gradually rising to 1° F., or 1.5° higher in the afternoon. On the morning of the second day, the temperature is $.5^{\circ}$ to 1° lower than in the afternoon of the first day, and gradually rises to 1° or 1.5° degrees higher than it was the afternoon of the day before; and so on, gradually rising every day for the first five or nine days, which ends the first period of the disease.

In the second period, the fever is continued, beginning in the morning, with a temperature of 101° or 102° , and gradually rising in the afternoon to 102.5° to 103.5° . This continues for five or nine days, which ends the second period.

In the third period the fever gradually remits. The temperature, each day, is lower and lower every morning, but rising

to about the same height in the afternoon for five or nine days, which ends the third period.

In the fourth period the fever intermits; the exacerbations gradually lessen, from day to day, until a normal temperature is reached. This period lasts from five to nine days, and with it, the disease ends, leaving the patient weak and greatly prostrated, subject to many accidents during a long and tedious convalescence.

The gravity of typhoid fever is measured by the height of the temperature. Hence a prognosis may be made with great certainty with the thermometer. This instrument also indicates irregularities, complications, treatment, relapses, and approaching convalescence or coming death. Indeed, it is to the physician, when intelligently used, what the compass is to the mariner, and it is as impossible to study fevers without a chart of their thermometric range, as it is to study the geography of a strange country without accurate surveys.

The temperature of typhoid fever usually ranges from 103° to 105° ; but when hyper-pyretic, the temperature may reach as high as 110° F., and then we may anticipate a fatal result. The patient may have a relapse after convalescence has been well established, and go through the same stadium as at first. These cases are frequently mentioned as typhoid fever lasting sixty days; but I am satisfied if more accurate observations had been made, they would have been reported as relapsing cases. The highest daily markings of the pyrexia take place some time between noon and 11 o'clock at night: the lowest of the apyrexia between that time and 10 o'clock in the morning, and this rhythm is to be observed in every case of uncomplicated typhoid fever. This feature, taken in connection with the formula of ascent of the pyrexia during the first week of the disease, is a sufficient indication in every doubtful case to make an unmistakable diagnosis, as no other fever shows a similar pyrogenic course. To explain: If we find a fever, beginning in the morning at a normal temperature, and in the afternoon or evening rising to 104° or 105° F.; on the second day the same, and on the third and fourth days a repetition of the first and second; or if the temperature retrogrades any time during the first week of the

disease, or a complete defervescence takes place, we may exclude typhoid fever from the diagnosis.

The following are cases of typhoid fever taken from my notes which were made at the bedside of the patient in 1876.

The first patient was a young married woman, twenty-nine years of age, who had only two weeks before, in company with her husband, two children and sister, come from Illinois from a neighborhood where typhoid fever was prevailing at the time they left. The most marked features in her case were fever rising $.5^{\circ}$ to 1° higher each day for the first seven days, and running at the same height during the pyrexia of each day for seven days more, then remitting each day for seven days, at the end of which time a normal temperature was reached. She also had a greatly enlarged spleen, hæmorrhage from the nose during the first week, and later from the bowels, diarrhœa and tympanites, and in the third week an abortion of a four months' fœtus. However, she finally made a good recovery. Her husband was taken sick in the mean time with similar symptoms, and he died about the eighteenth day of his illness with hæmorrhage from the bowels. Her sister was ill, also, for twenty-eight days with a fever of like features, but recovered. Her children were not attacked.

The following is the notes of a case of continued malarial fever:

Miss Callie W——, aged twenty-seven years, a rather delicate lady, had prodromita for some days and went to bed with fever November 17th, 1881, with a pulse of ninety, and a temperature of 99° . For a few days the fever was about the same, and then fluctuated—sometimes high, then low, during the whole illness. The most remarkable feature in this case, and indeed in most cases of continued malarial fever, is the uncertainty of the fever, it being one day high, and the next low. There was no tympanites or ileo-cæcal tenderness. The urine was secreted scantily and the bowels were constipated. The fever lasted this patient sixty days, but I am sure it was owing to relapses brought about by over-eating.

From numerous observations I am satisfied that the natural course of this fever is from fourteen to twenty-one days. Malarial remittent fever has an abrupt and sudden beginning, with a chill, backaching and headache. In a few hours there is a remission, followed, however, by exacerbation. As a rule,

defervescence happens on the fourth or fifth day, sometimes on the third, and exceptionally is prolonged until the seventh or ninth day. Its tendency without treatment is towards recovery, but when thus left to itself it is apt to assume the continued form, with congestion, or, perhaps, inflammation of some of the viscera.

Pernicious remittent fever is ushered in (especially with children) with delirium, convulsions, great restlessness, and high temperature, but cool surface and extremities, and thus continues until defervescence takes place.

My object in presenting these different forms of fever is to direct attention to the difference in their thermometric range as a means of diagnosis. The comparison would be much more complete if we were to study typhus, yellow, and typhomalarial fever, but I fear I have already taxed your patience too far.

Among the immediate results of typhoid fever upon the organization, that upon the heart demands, perhaps, most attention, for the frequency of its pulsations depends principally on the degree of heat. Its contractions are parallel with the temperature. The pulse rises in frequency during the first week, remains at its height during the second and third, and again sinks to its normal standard during the fourth week. In some cases, however, as the fever advances the heart's action becomes very weak and rapid, so much so that the radial pulse can scarcely be counted. This condition of the heart is followed by cyanosis and hypostatic congestion of the lungs and other organs. The weaker the heart's action, the greater the difference between the heat of the surface and the internal portions of the body. Thus the surface continues to lose heat through the skin, and it is not replaced because the heart is too weak to send increased blood to the extreme capillaries. Hence, we find the extremities gradually cool every hour, while the internal temperature is high. The fever also disturbs most profoundly the functions of the nervous system. First, there is headache, restlessness and unquiet dreams; then muttering, and sometimes violent delirium, and finally complete loss of consciousness. No doubt, however, other factors are at work

which produce these grave symptoms, especially the toxic influence of the specific poison.

Having now studied the history, etiology and diagnosis of typhoid fever, we will next direct attention to its morbid anatomy.

When the period of incubation has passed, during the stage of prodromata, or after the disease has actually begun, great changes are found in the blood. It does not coagulate perfectly, nor does the serum separate from its solid constituents. The fibrin is diminished in quantity and quality, and the white corpuscles are greatly increased in number. Hence we find parenchymatous degenerations in those organs whose duty it is to build up and repair tissue waste, and eliminate obnoxious and useless material. These changes are found first and most extensive in the spleen. It is greatly enlarged, due to increase in healthy elements and congestion. In the first two or three weeks of the disease it reaches its maximum size, and in a few days afterwards begins to soften, and sometimes this change goes on to such an extent that it presents the appearance of a mass of jelly. The color is dark brown, sometimes almost black, owing to the brown pigment deposited in its substance. This condition of the spleen is found in ninety-eight per cent. of typhoid fever cases. Changes in the liver are not so frequent. It may be normal, or it may be enlarged and softened, with its cells granular and fatty. Degenerative changes are occasionally found in the kidneys; these changes are usually confined to the epithelium, but may extend to all the anatomical parts of these organs. The most marked parenchymatous changes in any of the organs are found in the heart. It soon becomes soft, with relaxed fibre of a grayish-brown or black color. The muscular degeneration is of a granular or fatty character, so much so that its tissues are easily broken down by the slightest pressure; and when it is removed from the body loses its natural shape by its own weight. Sometimes amyloid degeneration takes place in this organ, when it becomes friable and its cut surface presents a glistening appearance. Again, thrombi are formed, giving rise to vegetations on the valves and chorda tendinæ, which may be torn

loose by the blood current and carried to distant organs, giving rise to infarctions. The lungs are nearly always congested; their tissue is of a darker color than natural, with red, yellowish or white points of extravasated blood. On account of its resemblance to the spleen this congestion has been called splenization. Its tissue is of a firmer consistency than natural, and does not crepitate so freely. It has less moisture than usual. The cut surfaces are more uniform and homogenous in appearance. The alveoli contain numerous cells, and the capillary vessels are filled with blood; in fact, there is stasis of the capillary circulation, which resembles static pneumonia, but there is no exudation. We also find in these organs catarrhal bronchitis. It is generally not extensive, the larger bronchi only being involved. It may, however, extend to the smaller tubes, giving rise to capillary bronchitis and broncho-pneumonia.

The larynx sometimes takes on a catarrhal inflammation, and I have seen a diphtheritic deposit in the neighborhood of the tonsils and uvula, giving rise, after cleaning, to sluggish ulcerations which were stubborn in healing, sometimes spreading over the mucous membrane of the mouth, pharynx, epiglottis and Eustachian tube. The stomach is also liable to be attacked by degenerative changes similar to those of the other internal organs. Softening of its glandular structure is sometimes so destructive, that from this cause alone death may result, and at all events causing a tedious and unsatisfactory convalescence.

The history of the degenerative changes of this disease would scarcely be complete without referring to those that take place in the voluntary muscles. They may be either granular, fatty or waxy. In either form the muscular fibre becomes brittle, and in the worst cases it is entirely destroyed, presenting a yellowish or whitish appearance. In this way we can account for the great loss of muscular power during convalescence.

The salivary glands also are subject to changes similar to those of the other organs, causing a diminished salivary secretion. Hence the dryness of the mouth that is so prominent a symptom in such cases.

The degenerative changes, to which attention has been directed so far, are not characteristic of typhoid fever, for they have been observed in many other diseases; nor is it my intention, by directing attention to these pathological phenomena, to impress the idea that they are pathognomonic. The lesions, however, to be noticed now, in contra-distinction to those heretofore mentioned, are pathognomonic, and are never found in any other acute disease. I refer to the lesions of the intestines. Typhoid poison, in some mysterious and unexplained way, has a predilection or affinity for the mucous membrane of the small intestine, causing an inflammation of that tissue—specific in its nature, and producing changes which are characteristic of the disease. These changes are more marked in the neighborhood of the ileo-cæcal valve than in any other location. During the first week of the fever, the mucous membrane surrounding Peyer's patches becomes hyperæmic and swollen. The glands are enlarged and elevated, of a dark reddish color. This change in their appearance takes place in forty-eight hours after the fever begins, and by the end of the week all of the glands that are likely to undergo change are thus altered. During the second week lymphoid and large rounded cells with nuclei are rapidly developed in the agminated glands and solitary follicles, and they become swollen and more elevated. This cell growth does not stop here, but extends into the adjoining mucous membrane, passing even to and through the muscular coat of the bowel, and penetrates the sub-serous tissue. By the middle of the second week, necrotic changes take place in this cell deposit, or, like all inflammatory exudations, it may terminate in resolution or suppuration. If by resolution, then it becomes disintegrated and undergoes absorption, or the glands with the new formation may suppurate and discharge their contents into the intestinal canal; but the characteristic termination of this process is that first mentioned, namely, a necrotic one. The dead tissue separates and sloughs off, leaving the characteristic typhoid ulcer. The slough embraces the entire gland and the mucous membrane surrounding it, laying bare the muscular coat of the bowel, and sometimes penetrating

through all of the coats, causing perforation of the intestine. This process usually happens during the third week of the disease. The fourth week is the period of repair. Granulations now spring up from the base of the ulcers; connective tissue membrane is formed; the edges of the ulcers are drawn together, and finally they are covered with epithelium. The structure of the glands is never repaired, which leaves the cicatrix depressed and augmented. In many cases this process of healing is prolonged. While one side of the ulcer is granulating and cicatrizing, the other continues to ulcerate and extend, thus prolonging convalescence and sometimes producing death by exhaustion. These ulcers are located in the jejunum, the ileum, the large intestine and the stomach. They are of large size in the ileum, in the neighborhood of the ileo-cæcal valve. In the stomach, jejunum and large intestine they are small and round.

Analogous changes to those mentioned in the intestines take place in the mesenteric glands, especially those nearest the ileo-cæcal valve. These inflammatory changes reach their height in the last of the second or first of the third week, and then are gradually disintegrated, and are absorbed—some of them only partially; and in others of very large size, a dry, yellow, cheesy mass is left behind, with deposits of salts of lime, and enclosed in a fibrous capsule which sometimes ulcerates, and the contents of the cysts enter the peritoneal cavity causing fatal peritonitis.

Between the fifth and ninth day the characteristic eruption appears, which consists of round, rose-colored papules, scattered over the anterior walls of the abdomen, chest and back. They vary in number from two or three to a number sufficient to cover the parts spoken of, and sometimes extend to the legs and feet. At this stage of the disease headache abates and drowsiness takes its place, which is soon replaced by delirium, at first mild, and only noticed at night; but day by day it is more pronounced, as the typhoid symptoms are developed, until it is wild, and finally complete unconsciousness, with great subsultus tendinum, involuntary evacuations, picking in the air or at the clothing, and great prostration result.

Usually, about the third week, the diarrhœa commences; but it may be present from the first. However, the bowels are peculiarly susceptible to the action of purgative medicine. The discharges are of a yellowish-green color, and their reaction is alkaline. Sometimes in mild cases diarrhœa is absent from the first to the last of the disease.

The tongue is at first covered with a white coat. About the second week the tip and edges become reddened, and show a disposition to become dry. In the third week, the coat thickens and becomes brown, and sordes collect on the gums and teeth. Now and then the tongue throws off this coat, and presents a shining, glistening appearance, which indicates, according to my observation, a tedious convalescence. The sordes and incrustations may extend to the entire mouth, which is indicative of profound blood changes.

Nose-bleed is another symptom worthy of mention. It is generally observed during the first week, and recurs sometimes frequently. This is not characteristic of this fever, but is seen in many diseases.

By the end of the first week, a tenderness, pain and gurgling are perceptible in the right iliac fossa on pressure being made in that region. While making this pressure, the expression of the patient's face will frequently give evidence of pain before any complaint is made. This tenderness is greatly exaggerated when perforation occurs, which may be suspected if, after the third week, or even during convalescence, the patient is suddenly seized with severe pain over the right iliac region and extending over the whole abdomen, accompanied with great prostration, sunken, anxious expression, nausea, and rapid, feeble pulse.

About the beginning of the second week, tympanites usually commences, and often as the disease advances, becomes extensive. This symptom is owing to gas collected in the large intestine. It generally lasts until convalescence is fully established. As long as tympanites continues, great caution should be observed, for it indicates still existing intestinal lesions. The urine is at first decreased in quantity, afterwards increased. More urea than usual is excreted, but as long as the kidneys perform their function and eliminate it, no harm results.

This disease may result in death in any of its stages. Safety is not reached until all tympanites and diarrhœa are over, and the lesions of the stomach, heart, lungs, spleen, kidneys, nervous system and muscles have been permanently repaired. I have seldom seen a recovery follow a temperature of 106° F., if it remained at that height for any length of time. If such a temperature is reached about the seventh or ninth day, we may expect it to so remain for seven or nine days more, or during the second week of the fever, for this is the period when the pyrexia is at its height, and we cannot expect a lower range of temperature unless it is interrupted by antipyretic treatment. Therefore, under such circumstances the prognosis is a very grave one. But, on the contrary, if the temperature does not reach over 103° or 104° F., the prognosis, if no accidents intervene, is favorable. A sudden rise or extreme fall of temperature is ominous of evil. When the temperature varies in a very marked manner from the natural curve, it is indicative of complications; and when the remittent curve of the third week suddenly rises to the continued, it makes the prognosis more uncertain and guarded.

If the heart's contractions are full, regular and strong, not more frequent than one hundred and ten or fifteen to the minute, its impulse good and the first sound distinct, the prognosis is favorable. If, on the contrary, its pulsations are rapid, feeble, and without volume, numbering 130 or 140 to the minute, the apex beat weak, or scarcely heard, and the first sound indistinct, with cool surface of the body and extremities, we may predict a fatal termination. The prognosis is more favorable with children than with adults, and when the patient is over forty-five years old it is decidedly unfavorable. All forms of chronic disease, the puerperal state and the habitual use of alcohol increases the danger.

This fever is so complex in its nature, and the people attacked are so different in race, habits, age, constitution, etc., that scarcely any two cases are sufficiently alike to warrant like treatment. We should, therefore, be guided by these considerations, and our treatment should be rational and symptomatic. If it were possible to estimate and com-

pare numerically different plans of treatment, such an analysis would be a real advance; for then fact would take the place of speculation, and certain remedial influences would no longer be doubtful.

There is no way by which we can cut short or abort an attack of typhoid fever after the poison has once entered the system. If we can keep the patient alive a certain length of time, which is definitely fixed, and confined to twenty-eight days, recovery will follow, provided no accident happens. Therefore, our first duty should be to bridge over this chasm of twenty-eight days, and safely land the patient on the opposite shore. From the first day of the fever the patient should be confined to bed, no matter how light the attack may be. To sit up and walk, even about the house, after the fever begins to manifest itself, may increase the gravity of the case and so exhaust the nervous power, that even life may be compromised. Indeed, so well satisfied am I of this, that I would forbid the removal of a typhoid fever patient during any period of the illness, under any circumstances whatever. It has occurred at least twice in my practice while attending such patients, that they have been removed; once during the first week of the illness, and the other time during the third week. In the one case very much to the detriment of the patient; and in the other, I am sure, at the sacrifice of life. Complete rest in bed, therefore, is of primary importance, not only to preserve nervous power, but to prevent other tissue waste than that produced by the fever, and to favor elimination by the skin and kidneys by which an accumulation of waste material in the body may be prevented.

The room in which the patient is placed should be large and well ventilated without creating draughts, and, if possible, a different room and bedding should be used at night from that used in the day. The bedding and clothing of the patient should be changed every twenty-four hours.

From the first day, the food should be in some liquid form, such as chicken soup or beef essence, with now and then vegetable juices, as strained fruit in small quantities; and they should be alternated, so that the patient will not grow

tired of any one thing. Milk in unlimited quantities, as is frequently allowed and even advised by some practitioners, is sometimes a source of great trouble, and compromises, to a serious extent, the safety of the patient. It contains a large amount of caseine, which must pass into a solid form before it can be digested; the curd forms in the stomach, and may, on account of the crippled condition of that viscus, remain in an unchanged state, or it may pass into the intestines—in the first instance producing restlessness, wakefulness and increase of fever; and in the second instance, causing flatulent distention, irritation and increasing diarrhœa. It should also be remembered that milk contains a large amount of animal food. One pint is equal to a good-sized mutton chop; and yet typhoid fever patients are allowed to sometimes drink two or three quarts of milk in twenty-four hours, equal to five or six mutton-chops. Now, if this could be digested, which is altogether improbable, is it well that they should have that amount of animal food? Water is the most natural, as well as the best depurative agent, and is easily eliminated by the kidneys, skin and lungs. Therefore, it should be allowed in almost unlimited quantities.

If the bowels are at first confined, an enema should be given or a dose of castor oil to remove fæcal matter, which, if left alone, may prove a source of irritation, and thereby keep up diarrhœa. All sources of fresh poison should be carefully guarded against. Hence, disinfectants should be used in the close stool, foul air from drains and cesspools prevented, and if doubt exists about the drinking water or milk, they should be boiled. Local applications of cold to the head are always grateful, and, in connection with perfect quiet, is sufficient to alleviate the tormenting pain in the frontal region. However, the headache ends spontaneously from the fifth to the ninth day, and requires no special treatment.

A prominent symptom, and one that does require treatment, is sleeplessness, for the relief of which I have been in the habit of ordering a combination of henbane, bromide of potassium and chloral. Sometimes, when this symptom is very distressing and there is high fever, a tepid or cold

sponge bath will often be followed by quiet sleep. I do not think it good practice to give opium or its alkaloids to produce sleep. In the earlier stages it checks secretion and disturbs digestion, while in the later stages it acts unfavorably on the brain by increasing the anæmia of that organ, already existing, and it also has a paralyzing effect on the heart.

As long as the stools are confined to two or three in twenty-four hours, the diarrhœa should not be interfered with, for this is an effort of nature to eliminate the poison and throw off accumulated waste material; but if the diarrhœa increases to such an extent that the strength of the patient is compromised, it should be controlled. For this purpose I have found nothing so efficient, if the stools are alkaline, as dilute sulphuric acid, given in five or ten drops every two or three hours. Should this not succeed, we may resort to five or ten drops of tincture of opium in one ounce of cold water by enema, given morning, noon and night. Feter of the stools is best corrected by the administration of charcoal in teaspoonful doses several times a day, or creosote or carbolic acid may be given in one or two drop doses in mucilage every few hours. If charcoal is resorted to, it should be in an impalpable powder, and the animal charcoal is preferable to the vegetable.

To control catarrhal inflammation of the bowels, I know of nothing better than the sub-nitrate or the carbonate of bismuth in twenty, thirty or even one drachm doses, repeated every few hours. Some vegetable astringent, as catechu, or kino, or acetate of lead, may be added if thought advisable. If the contrary condition to diarrhœa exists, which is sometimes the case, it is best and most safely relieved by enemata, repeated sufficiently often to keep the bowels free from an accumulation of scybala, which, under such circumstances, is frequently a source of diarrhœa.

During the last of the third and the whole of the fourth week, tympanites usually begins, and it is sometimes so great that the action of the diaphragm is interfered with to such an extent that the lungs are not sufficiently inflated, thereby producing a sluggish circulation in these organs favoring hypostatic congestion, as well as preventing the blood from

being oxygenated. This excess of flatus in the bowels is caused by undue generation of gas with, perhaps, a deficient power of expulsion, due to a weakened or paralyzed condition of the muscular coat. Now, it is also that the necrotic process is at its height, and the nervous power at its lowest. At the same time the antiseptic digestive process is diminished, on which account the food, in an undigested and partially decomposed condition, enters the intestinal canal, where it is mixed with the foetid secretions and sloughs from the solitary and agminated glands, and thus generates gas by the decomposition of these substances.

Through this knowledge of the generation of gas, on which the tympanites depends, we have the key to its treatment, which is to arrest putrefactive changes in the intestines: *First*, By the administration of such food that no solid residue will be left. *Second*, To correct the fætor, which may be done most effectually by the administration of charcoal, as mentioned previously. To improve digestion, pepsin and acids are to be given with the food. Ten or fifteen grains of Boudett's pepsin, with five or ten drops aromatic or dilute sulphuric acid in water, with four or five drops of tincture of nux vomica, is the dose that I am in the habit of ordering three or four times a day. I have also seen the introduction of a long tube in the bowel mechanically displace a sufficient amount of gas for the muscular coat to regain sufficient contractile power to expel what remained.

If hæmorrhage from the bowels should occur, which, as we know, comes from the ulcers, and is therefore usually met with during this period, the patient should not, for any purpose whatever, be allowed to assume the erect position, and from ten to twenty drops of laudanum, in an ounce of ice-water, should be given, per enema, at once, and from one to five grains of acetate of lead, with from five to ten drops of tincture of opium or ten or fifteen grains of tannic or gallic acid should be given per orem every few hours. Or, if the hæmorrhage threatens life at once, ergotine must be administered, hypodermically, with opium and lead internally, and ice compresses applied constantly over the ilium.

But little nourishment, and of such a character that no residue will be left, should be allowed, for the bowels must be kept empty.

When perforation happens, we can do but little. To give the unfortunate patient, however, the chance, if there be one, for recovery, opium in sufficient quantities to prevent peristalsis must be administered, and literally nothing that can pass into the intestinal canal taken into the stomach. According to my observation, it is not likely that these directions will have to be observed longer than thirty-six hours, for this is a fatal accident, and life will not last longer than that length of time.

The fever, which, after all, is the most important feature in the disease, for on it depends the destruction of the tissues, and parenchymatous changes that take place in the different organs of the body, and which so frequently lead to death, or at least a tedious convalescence, we fortunately—thanks to Liebermiester—have it in our power to almost absolutely control. So important is this indication, that unless it be promptly met, many typhoid fever patients would inevitably perish. In fact, in hyperpyretic cases it gives to the patient the only chance of recovery. Even in a temperature of 106° F. or 107° F., if continued for some days, death will result. Such a temperature is absolutely incompatible with life, and for such cases the cold bath, repeated as often as necessary to keep down the temperature, is the only source of hope. When the temperature is not so high—for instance, 103° F. or 104° F.—it can be controlled with sponge baths of ice-water and whiskey, frequently repeated. When this method will meet the indication, it should be performed from the fact that there is no danger of collapse, which does sometimes happen by changing and fatiguing the patient, or from the effect of the chill produced by the cold, or when the recumbent position is changed to an erect one, or when the bath is continued too long. My habit has been, and I do not hesitate to say that it is the rule to be observed, that when the temperature can be controlled by sponging, it should be preferred to immersion; but in the event that the sponging should fail, then we should not hesitate to resort to

the bath tub. In either case, the temperature of the water used should be measured by the temperature of the patient. If the former is not high, I use, for sponging, tepid water. If, however, it be ordinarily high, for instance, $102-3^{\circ}$ or 103° F., I order it cooler, and if 104° or 105° F., ice cold, and if hyperpyretic, the bath. In using the bath, I am careful to have the water in the tub not more than one or two degrees lower than the temperature of the patient, so that there will be no shock to the system when first immersed, then the temperature of the bath is to be lowered by gradually adding cold water to the tub in which the patient should be left, until the temperature of the body is reduced to 100° or 101° F., and as often as it rises to a dangerous height, it should be repeated. The results of this treatment, are a grateful, soothing feeling to the patient, and frequently quiet sleep, with gentle perspiration, follows, in which condition the temperature will continue to decrease until frequently a normal standard is reached. This improved and encouraging condition lasts for from three to six hours before the fever begins to rise again. By this methodical use of cold water, I hold that its quite possible to conduct an otherwise fatal attack of typhoid fever to a favorable termination.

Alcohol, when given boldly, I have seen also reduce the temperature, especially when the heat is accompanied with feeble and failing heart, cool extremities and surface. In such an extremity as this, good whiskey is our main reliance, for we must sustain the heart's action. By improving the circulation with cardiac stimulants, we throw more blood to the surface, thereby preventing static congestion of the internal organs, and reduce heat by evaporation. Good whiskey is our best remedy for this purpose, and as a direct cardiac tonic, digitalis may be given in five or ten drop doses of the tincture two or three times a day. Sulphate of quinia and salicylic acid or salicylate of soda have also been used in twenty, thirty or even sixty grain doses as antipyretic remedies, but I must say that, as far as my observation goes, the disturbance of the stomach which they produce and which interferes so seriously with the digestive process, counteracts whatever good effect they have as antipyretics.

When the heart, either on account of parenchymatous changes or of nervous influences, becomes feeble and weak, as shown by the frequency of its pulsations and strength of its impulse, cardiac stimulants are indicated, and if given, time is gained for repair of its tissues and recuperation of nervous power. Here, alcohol is the great remedy, and by its prompt administration, these grave symptoms are relieved, the temperature is lowered, the heart becomes steady, with increased power and less frequency of its pulsations.

Alcohol is also the remedy for mental disturbances, such as wandering or delirium, which takes the place of the headache of the first week. When this does not succeed, cold should be applied to the scalp. For tremor, also, alcohol is to be given, for it depends on loss of nervous force. Indeed, alcohol is the remedy for the varied nervous phenomena of typhoid fever. It acts primarily on the nerves and secondarily through them on the heart and other organs and their physiological processes, on which depend the rise and fall of temperature; therefore, it lowers fever, increases the force and diminishes the frequency of the heart's pulsations, controls tremor, quiets delirium and produces sleep. It should be given only when these symptoms are present, and never to anticipate them; and if, after the first few doses are taken, the temperature is increased and the heart's pulsations are more frequent, delirium more wild, sleep more disturbed or passing into coma, it should be discontinued. The quantity given should be measured by the necessity demanding its administration, and when these indications are met, the amount should not be increased. Usually from four to eight ounces of good whiskey or brandy in twenty-four hours is sufficient for an adult. It is best to begin with the smaller quantity and gradually increase the dose until the proper amount is reached. If given in excess it will increase delirium, dry the tongue and check secretion from the different eliminating organs, thereby causing increase of temperature and produce sleeplessness and restlessness. The rule to be guided by in its administration is, that if the indication be a doubtful one, withhold it, or give it in small doses, carefully watching its effect.

In conclusion, to recapitulate, we cannot cure typhoid fever, but we may, by good management, conduct the majority of cases to a favorable termination. In many cases, no treatment, other than rest in bed, fresh air, cleanliness and proper nourishment, is required. When medicines are called for, it is to meet some special indication, and only those are to be prescribed which will best fulfill that end, and they should not be continued after the symptom for which they were ordered has been relieved. The conviction has been forced upon me, that he who most constantly and intelligently watches the natural course of the disease and prescribes only for symptoms when their gravity compromises the safety of the patient, will be most successful in the treatment of typhoid fever.

ART. II.—On Some Effects of the Rheumatic Diathesis. By W. F. A. KEMP, M. D., of Baltimore. (*Read before Baltimore Medical Association.*)

What shall be said at this time, is the outgrowth of a desire to determine, if possible, the connection between a rheumatic diathesis and the appearance of morbid growths. It has been my fortune to have had, within the last eighteen months, five cases presenting tumors, all of which have had rheumatic attacks, and presented rheumatic diathesis. It is true, the remarks to be made are speculative, rather than practical; they are also theoretical, and devoid of any especial clinical value. In offering such a subject for consideration, my excuse must be that *there is* profit derived from a consideration of topics other than those the most practical, though, indeed, time thus spent does not help to better prepare us to prolong life. Pathology, to which we are so deeply indebted for much that assists us, yet has pleasant and profitable fields of investigation, that yield only results that clear up cause and hint at effect, and leaves us still helpless and powerless before the malady we are to treat—at least very apparently so. The cases referred to are these:

Case I.—A maiden lady died at the age of 68. For years, frequent attacks of so-called muscular and neuralgic rheuma-

tism were experienced. Frequent attacks of sciatic and facial neuralgia, necessitating vigorous measures to relieve her, gave me excellent opportunities to observe her condition from time to time. The medicines which procured relief most effectually and speedily, were alkalies. Her urine, during these attacks, was invariably much more acid than normal, and of a higher specific gravity than that observed in the healthy states. There was in the left breast a small tumor, apparently of encysted variety, pronounced by eminent men to be of benign character. This tumor had first presented itself at least twenty years before her death. It gave her no inconvenience other than irritation by the unavoidable contact with her clothing. It did not grow, remaining, during the last ten years of her life, about the size of a filbert. About nine months before her death I was consulted in regard to its presence. At this time it occasionally pained slightly; I noticed it was harder than when on former occasions I had examined it. The story is told when it is stated that carcinoma developed; ulceration and hæmorrhage were consequent thereon—and death. There was no glandular involvement discernible anywhere. The axillary glands were perfectly free from any infiltration whatever.

Case II.—A male who had frequent attacks of inflammatory rheumatism, presented a tumor of the pancreas, with secondary deposits in lung. A microscopical examination of sputa gave evidence of carcinomatous cells. This case presented signs pointing to troubles in digestion, and by the peculiar character of alvine dejections pointed decidedly to pancreatic origin. He had heart complications, which, with pressure of tumor upon the vena cava ascendens, produced the most distressing anasarca it has been my lot to witness. He died suddenly of thrombus in the heart.

Case III.—Is mentioned here mostly because of its resemblance to the case just given. A man aged 58, carpenter by trade, has had frequent attacks of rheumatism. During the war he was on his back four months—so he states—with acute inflammatory rheumatism. A few years later he was attacked with a distressing and troublesome dyspepsia, which seemed to defy treatment, and left him with a lump or hardness just at the pit of the stomach. I cannot satisfy myself in regard to the exact nature, condition or position of this lump, because of the great anasarca, under which he is just now laboring; but the cervical glands are much enlarged, and are observable, especially in the left side. He also has heart trouble, and will shortly pay the debt due by all mankind.

Case IV.—White. A man seventy-two years of age; bachelor; a plasterer by trade. Has a tumor over the tenth rib of the left side, growing from its angle. He has had rheumatism frequently, though not for some years, until this spring two or three years ago. He met with an accident just after returning to work, and injured his ribs on the left side, after which the tumor just mentioned made its appearance, and is now growing rapidly. I suspect it to be carcinomatous.

Case V.—A gentleman sixty-nine years of age. In earlier life he was a frequent sufferer with inflammatory rheumatism; of late years he has been well, save an inability to walk rapidly, make much exertion, or go up stairs. He has mitral disease of the heart, and a well marked tumor of each testicle. The appearance they present incline me to suspect carcinoma.

That all development is complex, needs but to be mentioned, and the conditions upon which it depends are clothed in great obscurity.

The theory of Schwann, based upon a primordeial cell, offers the best accepted explanation for development. The day is fast approaching when pathologists will abandon the idea of there being a peculiar cell for every and each character of growth; and even now they look elsewhere for the development of special forms of tumor than in a perfected growth of parent cell. For instance, the idea of an ovarian cell being necessary to the development of ovarian cyst, is pretty nigh universally abandoned. When speaking of the local origin of cancer as against a constitutional cause, Dr. Hutchinson (Senior Surgeon to London Hospital, and Professor of Pathology and Surgery in the Royal College of Surgeons) offers, as confirmatory of his view, that cancer may develop from any abnormal sore or condition of part that impairs or destroys nutrition. A case of carcinoma of the cervix uteri was mentioned, under the care of Dr. Oldham, who assured him the sore had originally been an ulcer of syphilitic origin, and added that he (Dr. O.) had several times seen malignant disease supervene in cases of similar character. Mr. Hutchinson also mentions a case, under the care of Sir Jas. Paget at St. Bartholomew's Hospital, of a man with stricture of the urethra, who had numerous uri-

nary fistulæ in his scrotum and perineum, and in whom cancer of undoubted type developed itself about the orifice of one of the anterior fistulæ.

A strong argument in favor of the local origin of cancer, is that when it commences in a part which can be watched, it may be seen to first assume the condition of an irritable sore or watery induration. Such condition was observed in the first case mentioned previously. It may be well to state, in no one of the cases was any one of relationship affected with cancer, so far as they knew. I omitted to so state before.

In the paper before alluded to, Mr. Hutchinson observes: "The great arguments in support of the constitutional origin of cancer are its occurrence as a primary disease in internal and protected organs; its being sometimes hereditary; the want of success which so often attends operations for its removal; and its not very unfrequently assuming a multiple form and occurring in many different places at the same time." In support of local origin he uses these words: "I will put it as a clinical question to those of greater experience in the subject than myself, whether there is not, in many cases of cancer of internal organs, a history of previous irritative disease?" Such certainly was the fact in cases second and third presented to-night.

Case four may be accounted for in the manner indicated. Any departure from the normal condition of the part that causes extra development may eventuate in a cancerous deposition, especially if the growth be rapid, wherein we may expect to find malignancy. It is meant that the more rapid the growth, the greater the disposition to change in structure to a type altered from that in which it (the new growth) appears.

Case five must be passed with a mere notice. The complaint requiring medication has nothing to do with the tumors of the testicle; and when one is called to treat thoracic disease, the patient does not care to be questioned about a testicle disease, no matter how interesting the pathological condition may be. Where constitutional infection can be easily proven in primary cases, the subjects are most generally among the

younger, whilst by far the greater number of cancer cases occur in those more advanced in age, where constitutional heredity is hard to establish.

It appears singular enough that all my five cases should be in untainted families, and that all the subjects should be of good age, the youngest being fifty-eight. The question of rheumatism being a factor, was almost thrust upon me, because of the rheumatic attacks common to all of them.

Why does gout not produce the same result, comes before us at the same time. In both rheumatism and gout, we have acid in the blood—the exciting cause of the disease; at least such is the accepted theory. In gout there occurs a direct union of the free acid and the alkaline base, under peculiar nervous influences, and we have the knotty joints in consequence of local deposits, whilst in rheumatism there seems to be a less amount of acid—whether lactic or uric—possibly not enough to make such combinations, and only enough to produce the constitutional disturbance we recognize as rheumatism; it seems to me only on such an hypothesis can we have a compromise and recognize rheumatic arthritis. Animal chemistry is not all proven by experimental test in the laboratory. The subtle influences of life cause and produce results which can only be known by effects; the mode of their production in the economy is yet beyond our ken.

The so-called white blood corpuscle, with its amœboid powers, has been looked upon with great interest and curiosity, and to it has been attributed a great part in the processes of nutrition of tissues, and abnormal developments in them. The power of certain medicines over them is well known, and drugs such as are useful in sustaining life and preventing decay, are those which exert a power that prevents the amœboid properties of these cells being active. It would be interesting to note some of the experiments bearing upon this point; we content ourselves, however, with a reference to quinine, which, as a tonic, sustains, and, as a febrifuge, lessens the abnormal heat incident to waste in the economy. “We know that quinine (1 in 1,000) will stop the amœboid movements of the white blood corpuscles; it will check inflammation and the resulting out-wandering of these

same cells. If, in the febrile stage, when the size of the red blood corpuscles is diminished, quinine be administered, the globules resume their normal size. This last, however, occurs whenever the heat is reduced by the action of extreme cold." Prof. Binz has found that quinine, even in so small an amount as 1 part to 20,000, has a perceptible influence in preventing this amœboid movement.

In the light of more recent discovery, we may, perchance, approach yet nearer a solution of the conditions of the blood that favor growths and produce inflammations and hyperæmias. Quite recently, Dr. Bozzezero, of Turin, announced the discovery of a new and important constituent of mammalian blood. He says they have hitherto escaped notice, probably because they are so colorless and translucent, less numerous than the red, and less visible than the white corpuscles; and on account of the difficulty of observing the mammalian blood in the course of the circulation with a high magnifying power. They are to be observed, aggregated around the colorless corpuscles, or they adhere to the cover glass. They change with great rapidity, rapidly becoming granular, and appear to be the source of the small granular masses which have been described by many observers.

Without entering into a discussion of the many received theories as to the formation of clot, thrombus and the like, it is remarked these new elements seem to play an important part in the functional alterations of the blood. They are increased in certain morbid conditions, and play an important part in the production of thrombi. They constitute the chief part of the white clots in the mammalia, since they give rise to the granular material which is seen between the pale corpuscles, and which has hitherto been ascribed to degeneration of fibrin. Bozzezero urges that the formation of the clot is due, not to the white corpuscles, but to these new elements.

From the facts adduced, it appears that whereas the ordinary white blood corpuscle present noteworthy changes at the commencement of coagulation, these new elements are considerably altered; and where they adhere, there fibrin is deposited, and finally, that all agents which hinder their for-

mation, retard also the coagulation of the blood. The evidence is very strong that this coagulation—that is, the formation of fibrin—takes place under the direct influence of these corpuscles. Great difference of opinion seems to exist in determining whence fibrin originates, and also the purposes it serves in the blood; but this is known, that where fibrin is in excess, there we find increased plasticity or formative disposition.

I am of the opinion that whatever causes an amount of blood in a part more than necessary to physiological demand, may produce effects which eventually, if resolution does not occur, assume development; and that whatever causes stasis in capillaries must be the initial point for departure from the normal condition of the part. The opinion is entertained that thrombus of capillaries has not received the importance it deserves in consideration of the causes of growths. In the results to be obtained by a more careful and prolonged study of the formative elements of the blood, we can only hope to secure information that will enlighten and confirm our views of such changes. Whatever alters the nutritive properties of blood must not be overlooked in such a consideration, and whatever produces that condition of the blood which augments or facilitates its disposition to tardy passage through the tissues must not escape attention. The opinion is forced upon me, that rheumatism, more than any other disease affecting *per se* the blood, presents such characteristics. No disease is so apt to have, as consequences, so varied a character of involved structures. If our facts be facts indeed, this position must appear, to say the least, quite tenable. Whether rheumatism depend upon the circulation of lactic acid derived from muscular tissue over used, or due to uric acid from whence it may come, the condition of the blood being acid in excess, we look for disturbance in formative properties, and find that by it all the serous and fibrous membranes may be affected. From over acidity of blood, the heart itself appears to be the organ most generally affected; though a muscular organ delicate in mechanism, it is covered, both outside and in, with a delicate fibro-serous membrane—akin to the living membrane of the blood ves-

sels themselves. In the blood vessels themselves, even in the capillaries, we may look for those changes which may sometimes attain that development we recognize as morbid growths—morbid because not natural to the site of their appearance.

The cases related in your hearing, because of their peculiar rheumatic antecedent history, caused surprise at first; then the inquiry, could rheumatism possibly be a factor? When asked to open a subject before this Association, in consenting, we have offered these few thoughts upon the rheumatic diathesis—a cause at times in the production of growth. What has been said has been said crudely and imperfectly, yet *the opinion* cannot help being entertained as a plausible one, unless, indeed, the facts upon which it is based are proven or shown to be erroneous.

The discovery of Bozzezero confirms more strongly in my mind the conviction, that embolism has more to do with pathological processes than is generally accredited to it, and that any state of the blood which assists the formation of thrombi, etc., must be potential in causing pathological conditions, and that the circulation of free acid as found in rheumatism, answers all such conditions.

ART. III.—**Phthisis, and the Means to Prevent it—Its Heredity and Contagion.** Read before the Richmond Medical and Surgical Society, July 18th, 1882. By M. A. RUST, M. D., Richmond, Va.

Gentlemen,—At our last meeting, the task of discussing the means to prevent consumption was given me. I accepted, although I should not have selected this subject. It embraces a whole world of ideas, although the undisputed data which science furnishes are very few. Nothing can exceed the importance of this subject; no plague, by whatever name it may be known, devours so many victims as phthisis.

Prof. Koch, one of the most exact investigators, tells us that one-seventh of mankind succumbs to it, and one-third of the death-list of those who die in active middle-age, belongs to it. I recollect well, that Rokitansky, in his lectures on "Pathological Anatomy," forty years ago, estimated on a

basis of 16,000 systematic *post-mortem* examinations made by him, that over half were cases of developed or latent phthisis or cases showing cicatrices or vestiges of former tubercular processes healed by nature.

The Anatomo-Pathological Institute of the great Vienna Hospital was, in Rokitansky's time, unique. Every person dying in the hospital was, without exception, removed to the Anatomo-Pathological dissecting halls, where Rokitansky, with his assistants, from morning till evening, conducted a systematic examination of every organ—regardless of the diagnosis of the treating physician—the results being recorded in a kind of protocol.

I propose this evening to give you only a “causerie” on the subject of consumption; and English words not flowing so readily to my lips, I had to put it into writing.

Means for the Prevention of Consumption.—Where shall we look for them? I would answer everywhere, only not on the shelves of the drug-store. *Everywhere*—this means the whole surroundings in which man lives and which shape *his*, like any other animal's, destiny—and with this we find ourselves at once landed in the domain of hygiene.

To hygiene, this youngest daughter of our science, belongs the future of the medical realm! It is comparatively only a few years since hygiene commenced to exercise her influence, yet the results already overshadow the grave doings of the therapeutic man. Casting a glance on hygiene in general, the most extraordinary paradoxical facts stare one in the face.

First, Man has, till recently, cared *more* for the hygiene of the soul than of the body. I do not so much mean that kind of private hygiene of the soul, when the individual rightly and legitimately performs certain acts which he imagines pleasing to the being he reverences, but rather the public hygiene of the soul when a community dictates to all its members iron rules concerning what shall be considered good and what bad for the health of the soul.

I will not enter here upon historical details; it seems to me that in the serene classical antiquity but faint traces of this soul hygiene are to be met with; on the contrary, we

find it much developed amongst the Asiatic peoples, especially in Judaism; and, Christianity, evolved from Judaism, brought it to the highest perfection. How these rules were enforced in the dark middle ages, what heroic drastic means were employed, you may read in bloody letters on every page of the history of the last 1,000 years. Even in our enlightened days some other remnant of it may be found lurking in a dark corner of every country.

Second, We find, from the earliest time, the cattle-raisers, the rural economist, exercising a certain care in the breeding of animals, bringing together select couples with a distinct purpose of improving the race. But the same men, in choosing their own mates, look at a thousand things—the shape of the face or body, the complexion, mode of dressing or thinking, metaphysical views, the money in the pocket or in perspective, etc., etc., rather than at the *one* most important point—the condition of health.

I propose to discuss now, with you, a number of agencies connected with the propagation or with the prevention of consumption, namely, heredity, contagion, breathing, light, air, nutrition, social conditions, etc., etc. Every one of these topics, if I would attempt to give only the shortest resumé of the state of science about it, would occupy several evenings. Consequently, what I have to say can be but very fragmentary.

I. HEREDITY.—First and most important of all causes of consumption stands heredity. That consumption is hereditary, would seem, at first sight, an indisputable fact; nevertheless, this matter has been one of discussion. This depends greatly on the definition given of consumption. I shall have more to say on this subject when we treat of the nature and causes of consumption.

Since Virchow discovered the cells of the tubercle—splitting the various pathological processes, which went under the name of consumption into phthisis and tuberculosis—phthisis has been considered as an inflammatory process leading to cheesy metamorphosis or cheesy pneumonia, whilst the old term of tuberculosis became limited to the presence of the gray miliary tubercle—a specific growth formed of cells,

a properly so-called neoplasm (new formation) or heteroplasm (formation foreign to the surrounding tissue). The miliary tubercle being considered as of a virulent nature, was consequently also considered as the medium of transmission through heredity. But its hereditary virtue was again put in question on the ground that no record existed of a case of intra-uterine tuberculosis or of a child born with miliary tubercles. Heredity, according to these views, is limited to the inheritance of a certain constitutional susceptibility or disposition to yield to such injurious influences as favor the development of consumption. This disposition is characterized externally by the so-called paralytic thorax, when, without any structural change of the lungs, the thoracic muscles are in such an enfeebled, quasi-paralyzed condition as to be incapable of performing the function of fully expanding the thorax.

There is, even to-day, a disagreement as to which is more dangerous to life: Phthisis, in the above given sense, or tuberculosis. Niemeyer, about ten years ago, cast into the medical world the winged words which created so much sensation; viz.: "*The great danger which threatens the phthisical is, that he may become tuberculous.*" Others have lately arisen who say (basing their opinions on the fact that we have evidence enough of the vestiges of tubercles healed by nature, but no indisputable evidence of such a healing process in cheesy pneumonia) that one must make Niemeyer's words turn a somersault and put them thus: "*The great danger which threatens the tuberculous is that he may become phthisical.*" The fact is that tubercles and cheesy metamorphosis go mostly together, and we are again unable to draw the subtle line between tuberculisation, infiltration and cheesy pneumonia.

Twelve or fifteen years ago a physician was deemed ignorant who could not make these fine distinctions. To-day new facts have been brought to light which show that we cannot keep these various morbid processes asunder; and, after a long circuitous route of eighty years, we find ourselves again at the point where we must admit even the identity of tuberculosis and scrofula, from which point our

predecessors departed at the beginning of their scientific labors. The enlargement of scientific knowledge, gained on this long route, is immense; but we must confess that, as far as medical help is concerned, the poor consumptive is not better off than 100 years ago, when the doctor, with wig and pig-tail, sat at his bedside, shrugging his shoulders and taking a snuff.

About heredity, *one* fact cannot be questioned, viz.: That we men of practice are compelled to see daily, consumptive children brought into the world by consumptive parents; and the question arises, Can propagation by heredity be prevented? Nothing could more contribute to lessen it than the prevention of intermarriage between the affected subjects. If the State would assume only a fractional part of the authority which the executive of soul hygiene formerly usurped, it could, by a number of stringent measures, in some degree, put a check to the propagation of this disease.

In principle, the State *ought* to have the necessary authority to carry out all sanitary measures which affect the public health; and examples are not wanting, even at the present day, of State interference in marriage. Thus we find, for example, in England an old law forbidding the marriage of a man with his deceased wife's sister. This law stands in the way of the happiness of many; public opinion wants it abolished. A bill abrogating it passed the House of Commons last session; in the House of Peers a large minority, including the Prince of Wales and members of the Government, voted in the same sense, but the majority of the Lords, reverting to the ancestral views of soul hygiene, rejected the bill.

But we can all see, that with such a widespread disease as consumption, action by the State would involve too much interference with the most delicate and intimate relations between men. That the propagation of an infirmity *may* be prevented by the prohibition of intermarriage has been tried with success by the Austrian Government in the case of Cretinism.

Now, what can be done? Wait for the enlightenment of the public? This postpones the matter to a very dim future.

We physicians, to whom the care of the bodily welfare of the public is entrusted, have the task to act in this matter by advice, offered with delicacy and reserve; we, as the priests of the goddess Hygiea have the sacred mission to prevent evil and sins against the laws of health. Whatever you may think about it, I believe a time will come when, in matrimonial engagements, an important part will be assigned to the examining physician.

II. CONTAGION.—Next in importance to heredity comes contagion. Here we meet with the same difference of opinion. No one advances a positive denial. A fact, proved by a thousand experiments, cannot well be denied; but from the wide variance of the explanations given of the fact, the fact itself has become “sicklied over with doubt.” Nor could it be otherwise. We are even, to this day, ignorant of the nature and causes of consumption. The experimenters did not, till very recently, know precisely where to seek the medium of the specific contagium. They experimented with the blood, perspiration, sputa—with matter taken from suppurating lungs, from lung cavities, from suppurating blisters, ulcers, etc., etc. Many of the experiments produced no results; thousands, on the contrary, were productive of positive results.

The most conclusive were the experiments of Tappeiner. He placed dogs in narrow cages and seated a consumptive person near to blow in their faces. In every case, a mass of tubercles was found in the lungs of the animals. Tappeiner and others repeated the experiment on dogs and rabbits by making them inhale through the atomizer phthysical sputa suspended in water. The result was the same.

Schottelius, and other adherents of the inflammatory theory, strove to demonstrate that, even in the successful cases, the induced morbid product was only the result of an inflammatory process caused by irritation through deleterious matter. They tried to demonstrate, histologically, that this deleterious matter, irritating the bronchial tubes, bronchioli and alveolar passages, produced there catarrh and morbid changes; whilst the real tubercle, being the result of a general invasion, is invariably located in the interstitial or inter-

alveolar tissue of the lungs. These contradictions were legitimate, as we may suppose that in many cases the matter used for such experiments was really a mixture of various deleterious substances.

This was sufficiently proved by some of the experiments of Lebert, who, whilst inoculating rabbits with tuberculous matter, saw the animals succumb, not to tuberculosis, but to septicæmia.

It was also proved by systematic experiments, conducted by Lebert, and recently by Schottelius and others, that the introduction into the organism of various irritating substances, produced in the lungs of the animals an inflammatory process, similar in all respects to the phthisical process.

Organic or inorganic matter, mercury or inert matter, as, for example, coal dust, etc., injected subcutaneously, or into the jugulars, or repeatedly pushed deep down into the trachea and, more recently, the inhalation of atomized organic matter have provoked, in many instances, the development of the tubercular process.

It may perhaps interest you to mention that, in a number of rabbits into whose jugulars an injection of mercury was made, the post mortem examination showed tubercles in the lungs similar to those produced by inoculation with tuberculous matter—these tubercles containing in their centre a minute globule of mercury.

Notwithstanding all contradictions, it is proved beyond doubt by these experiments, that consumption is transmissible from men to animals; it is, on the other hand, equally proven that consumption may be acquired without inoculation, infection or heredity; moreover, it has been proved that, in animals, certain inflammatory processes can be artificially produced which lead to the development of consumption without the intervention of a specific virus.

Common observation furnishes ample evidence of the contagiousness of consumption. Though the virulence cannot be intense, as we do not find persons infected by a short contact with the consumptive—and the position of Tappeiner's dogs is one in which men will hardly place themselves—nevertheless we are bound to admit that those who are in

long and close contact, such as exists in married life where the husband or wife is consumptive, are exposed to danger. Generally it is the devoted wife, who has nursed a consumptive husband through a long illness, who falls a victim to it.

Looking back in history, we find the fact of the contagiousness of consumption enunciated by medical authors towards the end of the last century as a vague opinion. A little later, we meet with the first experiments on animals to prove or disprove the contagious nature of scrofula and consumption. Kortum, in Germany, seems to have been the first. He experimented on children; Héberard, in France, a few years later on animals.

The tubercle, as a form of disease, *sui generis*, was at that time not known, but was discussed as a species of scrofula. They imagined a particular scrofulous virus (acrimonia) which would, under certain circumstances, develop into consumption, scabies, tinea, cancer, etc. The inoculative experiments which were undertaken at that time were mostly for the purpose of disproving the accusations of the adversaries of vaccination, who maintained that the scrofulous poison was propagated through vaccination.

It is rather startling to read a number of reports of children being experimentally inoculated, either with vaccine virus mixed with matter from scrofulous ulcers, or with pure scrofulous matter; but those were times when societies for the prevention of cruelty to animals and anti-vivisection societies had not been invented. Fortunately, these experiments had no evil results. We must add, that the experimenters acted in the firm belief that such inoculation was either entirely harmless, or could produce, at the worst, only a local affection. This is proven by the acts of Héberard and Lepelletier, who inoculated themselves with scrofulous matter with no other result than a slight suppuration, which ended after a few days with cicatrization. As late as in Laenec's time the same opinion seems to have been prevalent. In this connection, we find a very remarkable passage in Laenec's work, which is apt to cast a strong light on the contemporary condition of science in regard to this subject. In the last chapter of the first volume of his great and im-

mortal work—great and immortal, though to-day it has but an historical value, Laenec says :

“Is it possible that direct inoculation can produce at least a local development of tuberculous matter? I am in possession in regard to this, of only a single fact; although a single fact proves nothing, I think it right, nevertheless, to mention it. About twenty years ago I wounded, whilst dissecting a tuberculous subject, the index finger of my left hand. At first I paid no attention to this scratch; but the following day an erythema made its appearance and gradually an oval-shaped swelling formed, which at the end of eight days had attained the size of a cherry-stone and seemed to be imbedded in the substance of the skin. At the same time, the point at which the saw had scratched the epidermis opened, and a small, yellow, hard body resembling a raw tubercle made its appearance. I cauterized it with *butyrum antimonii*. I felt scarcely any pain; after a few minutes, when the salt had penetrated the whole substance, I removed the little tumor by slight pressure. The caustic had so far softened it that it resembled a softened tubercle, crumbling under the pressure of the fingers. The place occupied by this tumor formed a small cyst, with pearl-colored transparent walls, without any trace of redness. I again cauterized this cyst; cicatrization followed quickly, and this little incident had no further consequences.”

I will here add, without venturing any remark or opinion, that a few years after the publication of his work—that is, about twenty-five years after the occurrence of the little accident he narrates—Laenec died, and his disease was consumption.

After the appearance of Laenec's work, we meet with a good many reports of wounds or scratches incurred in the dissection of tuberculous lungs. Thus Albers records five cases which came under his own observation, and describes them very minutely. Three or more days after the injury, the surrounding tissue appeared inflamed and tumefied and was painful. After the disappearance of redness and pain, a small, hard, yellowish tumor, about the size of the head of a pin, or somewhat larger, had formed; this tumor, once formed, was very obstinate—resisting, in one case, for eight years, all attempts at cauterization, even with the actual cautery, and yielded only to a suppuration maintained for a long time with *emplastrum cantharides*.

About 1830, Malin communicated a striking and interesting observation. He was attending a consumptive lady who had a pet dog. The lady had the ugly habit of spitting about, and the dog the still uglier one of licking up the sputa. The dog soon commenced to cough, to lose his appetite, and after six months he was "a corpse." The lady could not exist without a pet, and procured for herself another dog. The same thing was repeated; the lady spat, the dog licked, and at the end of seven months the dog followed his predecessor to a better world. Now, Malin was struck with this extraordinary fact. He made a post mortem examination and found a part of the left lung of the dog destroyed by suppuration, and a large cavity in the right lung. This was a fact of the utmost importance, which should have opened the eyes of the medical world. Malin's dogs might have become the forerunners and prophets of the coming bacillus; they might have been glorified and sanctified as the self-immolating martyrs for the redemption of coughing humanity! But the medical world was not yet ripe for such a revelation. Malin's dogs, in their graves, were soon forgotten, and the world had to wait another half century for the advent of Koch's bacillus.

Ten years later, we meet in Klenke, the experimenter who, for the first time, maintained and proved by experiments the transmissibility of tuberculosis from man to animals. He injected gray tuberculous matter from the lungs of a consumptive into the veins of rabbits. After six months the rabbits were killed, and the lungs and liver were found charged with tubercles. These experiments, incomplete as they were, might have served, at least, as a hint in the right direction. But the hint was not taken. Klenke, moreover, was a modest scientist—not noisy enough to command attention. The little pamphlet in which he published his experiments was soon forgotten.

The labors of the next twenty-five years were not productive of many results—till we meet in Vilmain the real discoverer of the transmissibility of tuberculosis. In two papers (1865–1868) read before the Imperial Academy of Medicine in France, and in his greater work, "*Etudes sur la Tubercu*

lose, *Preuves Expérimentales de sa Specificité*," are recorded all his numerous experiments, conducted with greater exactness and better scientific methods than hitherto employed. Vilmain formulates his conclusions as follows :

"1st. Tuberculosis is a specific affection.

2nd. Tuberculosis has its origin in an inoculative virus, like syphilis, variola, etc., and can be produced only by the intervention of this virus, and by no other means.

3rd. Thus tuberculosis is produced either by direct inoculation, by contagion, or by germs bearing the virus suspended in the air.

4th. Tuberculosis is transmissible from man to animals."

Vilmain's conclusions created, at the time, a great sensation—although the labors of the last decade have shown many of them to be erroneous. Vilmain was also the man to make himself heard by the medical world; and the impulse he gave to scientific research on this subject cannot be too highly estimated.

The Academy of Medicine having appointed a committee to investigate Vilmain's labors, this committee repeated Vilmain's experiments, adding a good many of their own, and in their report to the Academy confirmed, in the main, Vilmain's conclusions.

After Vilmain, the scientific labors in this field accumulated in such masses that the shortest mention of their main results would require more time than is at our disposal.

These researches may be still fresh in your memories, and you also know that they culminated in Koch's great discovery. You have all read of it, and can appreciate its promise for the future.

Koch, by his discovery, has not only put, what was proven before, beyond a possibility of doubt; he has not only differentiated from the surrounding tissue and brought to light the former hidden medium of the tuberculous contagium, but he has also bestowed on the laboring scientist another boon. Cultivating the bacillus artificially, through many successive generations, for long periods of time (from three to six months), bringing every new generation to breed in a fresh medium, he has obtained the bacillus in its entire purity, free from all the matter which originally surrounded

it. With this bacillus, he executed his inoculations, which were followed, in every case, by the reproduction and spread of the bacillus and the induction of tuberculosis in the animal. By putting this purified bacillus before the experimenter, he has cut off the main source of the fallacies of former experimentation.

I have now passed, in rapid review, before your eyes, the scientific labors of the past eighty years, casting only a flash of light on some leading facts. In the light of these facts can the contagiousness of tuberculosis be doubted? And—I cannot refrain from putting the question—is it not astonishing that so little care and precaution have hitherto been taken to prevent contagion? Since Koch's discovery of the bacillus in the sputa, the duty to interfere forces itself upon us with a hundred-fold weight. We know that the closer and longer the contact between the sick and the healthy, the greater the danger to the latter.

To put a dividing hand between family ties is a very delicate task, and we may have to incur the displeasure of all parties; but our duty must be performed at any cost.

Easier to perform is the duty of enforcing cleanliness. We know now the source and the character of the contagion. Remember, then, that the bacillus does not always fly to the spittoon when he leaves his master; he is often flung on floors and carpets, whence, the next morning, the housemaid's broom sends him floating in the air, free to seek a new host.

With the advance of science, we find ourselves surrounded by an unseen world which had never entered the dreams of the metaphysician. Beware, then, how you send the feeble and the phthisically predisposed to crowded, ill-ventilated places. In such places—churches and theatres, prayermeetings and dancing parties—we must be prepared to meet the new denizen of our unseen world—the *Bacillus Kochii*.

Quinine.—It is said that the annual consumption of quinine is about 220,000 pounds, of which amount, the *Medical and Surgical Reporter* says, about one-fourth is used in the United States.

Clinical Reports.

Case of Death Following the Administration of Chloroform.

By HUNTER MCGUIRE, M. D., Ex-President Medical Society of Virginia, formerly Professor of Surgery Medical College of Virginia, etc., Richmond.

Mrs. M., aet. about 35, mother of six children, came to me October 6th, 1882, with rupture of the perineum, the laceration extending into the rectum. She was about the usual height, rather thin in flesh, but healthy, and had never had any serious attack of sickness. Examination of heart and lungs revealed no sign of disease, nor was there any indication of disease of any of the other organs of the body. On the 10th of October, the day appointed for the operation, she ate a simple breakfast; her bowels were moved by an aperient taken the night before, and at 9 and 11 o'clock she took five grains of quinine. At 2 o'clock, when I entered the room, I found her quite cheerful, and I thought with less than the usual apprehension about the operation and the use of chloroform. She was in bed, in her loosely-fitting night-clothes, her head supported by one pillow. About one drachm of Squibb's chloroform was poured into a napkin, folded into the shape of a cone, open at both ends, and the lady began to inhale it. To avoid the danger of giving the vapor in too concentrated a form, the napkin at first was held several inches from the face, and gradually brought closer to her mouth and nose. She breathed the chloroform quietly, without choking, coughing or other resistance. Her face was turned towards me as I sat at the side of the bed, and she kept her eyes wide open, looking up into my face; the back of her right hand and arm lay across my knee, and I kept my finger on the pulse in this arm, noticing it carefully. Her wrist was thin, the artery prominent, and the pulsation distinct. I noticed at the time how clear, distinct and rather full the pulse was. As the day was warm, a window near the bed and a door opposite were opened. In the room with the patient and myself was Mrs. Jenkins, Superintendent of the "Retreat." Outside of the open door, in the hall, were my two assistants, Drs. Hugh Taylor and Lewis Wheat.

After she had breathed the anæsthetic for about two minutes and was still conscious, the pupils of both eyes slowly dilated to two or three times their natural size. When I saw this, I spoke to her, and she answered me intelligently.

While she was speaking, the pulse in the arm upon which I had my finger stopped suddenly. It did not flutter and gradually fail, but abruptly ceased. The last stroke was as full and distinct as those which preceded it. A blow upon the heart with a hammer would not have stopped it more abruptly, so sudden and complete was the *cardiac paralysis*, and this took place before she was under the influence of the chloroform and while she was yet conscious. When the heart stopped, the face became palid, some convulsive movements of the muscles of the face and neck occurred, spasmodic, not tetanic in character; dilatation of the pupils slightly increased, and respiration continued for some seconds after the pulse ceased beating at the wrist. At least twenty-five or thirty respirations occurred after the cardiac paralysis, but the breathing was irregular, convulsive and imperfect. Fifteen or twenty seconds intervened between the first appearance of dilatation of the pupils and arrest of the heart's action.

Nitrite of amyl, galvanism (both agents were close at hand), inversion of the body and artificial respiration, kept up for an hour, were employed, but were of no avail.

[NOTE BY THE EDITOR.—The above case is exceedingly interesting, and we cheerfully give it a place in our journal. It is reported with great minuteness of detail, and, coming from so close and clever an observer as Dr. McGuire, it must be of value to all students of anæsthetics. Regarding the time which intervened between the dilatation of the pupils and the *cardiac paralysis*—has such an effect been observed before? Is it usual? If so, we have a symptom of warning which should not be disregarded. The Editor happens to know that Dr. McGuire has given chloroform thirteen or fourteen thousand times, and this is only the second death from this agent which has come under his notice which can be ascribed to chloroform. Indeed, in regard to the former case (reported in the May number, 1878, of this journal), other causes than the use of chloroform may have operated to bring about the fatal termination. The chloroform was properly administered in this case; the lesson to be impressed by this report is that a like fatal accident may occur in the practise of any physician or surgeon who has to resort to the use of anæsthetics.]

Original Translations.

From the French and German. By WM. C. DABNEY, M. D., Charlottesville, Va.

The Comparative Action of Iodoform, Salicylate of Bismuth, Boric Acid and Salicylic Acid in Typhoid Fever.—At a recent meeting of the Academie de Medicine, M. Vulpian read a paper on this interesting subject. He commenced by saying that according to the views generally entertained at present, the typhoid poison enters the system by the digestive passages, and then accumulates in the lower part of the small intestines, when it commits its local depredations and enters the general system. Hence it is necessary, in order to destroy the poison, to give to the patient some antiseptic substance, which, on account of its sparing solubility, will not be taken up from the bowel before reaching the diseased part.

Having this view before him, M. V. has made investigations with the drugs mentioned in the heading of this paper, and with the following results:

(1.) *Iodoform* did not give good results. Its powers as an antiseptic have been very greatly exaggerated, and it does not prevent putrefaction.

(2.) *Salicylate of bismuth*, or at least the product sold by this name in the shops, is a substance badly defined, containing, perhaps, some salicylate of bismuth, but a number of other substances besides such as free salicylic acid, compounds of bismuth, etc. It possesses very powerful antiseptic properties, acting on the vibriones of fermentation in two or three hours. The results obtained from its use in sickness have not been satisfactory, though they were by no means negative. When a daily dose of 8, 10, or 12 grammes was used, the stools were disinfected; there was an abatement of the morbid temperature, but there was some dyspnoea and nasal and intestinal hæmorrhages produced. Having had two or three cases of this kind, Vulpian had ceased to employ the agent.

(3.) *Boric acid* is well borne by patients in the dose of 12 grammes a day, but the effects were negative.

(4.) *Salicylic acid* was given in the dose of 6 or 7 grammes a day—first in solution with phosphate of lime, then in a pure state in rice paper. It was given in small doses (25 centigrammes;) but the amount given during the day was 7

grammes, and this was continued for fifteen days. In young subjects it occasionally caused delirium, which ceased when the use of the medicine was suspended. In some cases, also, albuminuria was observed; but this was not to be attributed to the acid, because it is common in typhoid fever at any rate, and it disappeared during the administration of the medicine. The therapeutic effects were very marked. In thirty-six or forty-eight hours, there was a fall of 4° C. The same results were obtained with carbolic acid and carbolate of soda. At the same time with the fall of temperature, the general condition improved, the prostration diminished, and the patients were able to speak. Furthermore, the fall of temperature was constant and persistent, and lasted twenty-four or thirty-six hours after the use of the medicine was stopped.

M. V. states that the cases which he treated were too few in number, and the epidemic was too mild a one in character, to allow any definite conclusions to be drawn as to the efficacy of the treatment; and he is in accord with most other physicians in the opinion that typhoid fever usually runs a definite course, and cannot be cut short by any remedies which have yet been discovered. But while the course of the disease may not be shortened, its chief symptoms may be relieved, and dangerous complications prevented, by the use of appropriate remedies. Such, he thinks, is the use of salicylic acid; and he suggests, also, that it may be used as a prophylactic during an epidemic.

M. Bouchardat thought that in the commencement of the disease, much might be done to lessen its severity; and he mentioned that oil of turpentine was a very useful antiseptic.

M. Vulpian said that carbolate of soda was, on theoretical grounds, an ideal antiseptic; but, as a matter of fact, it had caused dangerous symptoms, and could not be recommended.

M. Guérin said that there were three periods in typhoid fever—(1), that of poisoning, when evacuants were indicated; and (2), that in which the system had been profoundly altered, when various remedies were indicated, according to circumstances. He mentioned that he had obtained good results from the use of charcoal.

M. Lancereaux thought that salicylic acid owed its value simply to its antiseptic action, and that it had no effect on the disease itself. Reduction of temperature could be effected also by the use of tepid baths and the administration of digitalis. Salicylic acid reduced the temperature, he thought, through the mediation of the nervous system, and the course of the disease was not appreciably altered by it.

M. Villemain opposed the use of purgatives in the commencement of the disease, and stated that they were either useless or positively injurious. Patients should be disturbed as little as possible.

[The reporter in *Le Practicien* (from which this discussion is taken), states that the majority of French physicians are far from agreeing with M. Villemain as to the hurtfulness of purgatives; but certainly he would find, in this part of the world, a great majority of the physicians entirely in accord with him on this point.

With respect to antiseptic agents, comparative investigations, recently made, have led me to place great confidence in the salicylate of cinchonidia in doses of 5 grains every two hours. The method of giving salicylic acid and quinia, proposed by me in the *Virginia Medical Monthly* four years ago, has also given excellent results. This consisted in giving two or three 15-grains doses of salicylic acid at intervals of an hour, and then giving, an hour after the last dose of the acid, 15 or 20 grains of quinine. In this way a rapid and prolonged reduction of temperature is caused—the salicylic acid reducing the temperature more rapidly than quinine, but the latter producing a more lasting effect.—W. C. D.]

Treatment of Diphtheria by Pilocarpine.—This subject still seems to be attracting attention in France and Germany. M. Archambault recently read a paper on the subject before the Société de Therapeutique, of which the following abstract is taken from *Le Practicien* of August 28:

He tried this mode of treatment on twenty-one children. In two cases he employed hypodermic injections of 5 milligrammes three times a day. There was profuse salivation, vomiting and depression of the nervous system. In the other cases he gave the medicine in the form of solution. All the patients had a generous diet; in most cases profuse salivation was caused; sometimes, however, it was absent. Sweating was rarely produced. The false membranes were easily detached; but they readily reappeared, and the course of the disease was not modified in any way. Of the twenty-one patients treated in this way, nine recovered and twelve died—a deplorable result, says M. A., especially in view of the fact that the cases which recovered were very mild, at any rate. The mortality was less when a purely expectant treatment was employed.

M. Blondeau said it was probable that the profuse salivation would act injuriously by debilitating the patient.

The Use of Perchloride of Iron in Internal Hæmorrhages.—M. Lereboullet recently presented to the same society a paper by M. Guestre, with the above title. The author attacks very vigorously what he terms “the pretended hæmostatic action” of perchloride of iron when given by the mouth. Clinical reports, he says, show that in purpura especially there have been many more recoveries when the perchloride was not used than when it was. “When one recognizes,” he continues, “the excellent effects of ipecac in hæmoptysis, and ergotine in metrorrhagia—and, on the contrary, sees how often perchloride of iron is actually injurious in hæmorrhages from the alimentary canal—it is evident that this latter drug should never be administered as an internal hæmostatic.

M. Dujardin-Beaumetz said he frequently gave the perchloride of iron for hæmorrhages in anæmic persons; he thought it was transformed into a protochloride before producing any effect, and then acted by remedying the anæmia.

M. Constantin Paul employed the drug under similar circumstances.

The Treatment of Diphtheria and Scarlatinal Nephritis with Pilocarpine.—A paper with this heading was published by Dr. Soltmann (docent in Breslau), in the *Breslauer Arztliche Zeitschr.*, No. 7, 1882. His views, as will be seen, are materially different from those expressed by most of those participating in the discussion at the Academie de Medicine. His observations were made during an epidemic of scarlet fever in the Wilhelm-Augusta Hospital, and thirty-five cases were subjected to this treatment. Of this number ten had diphtheria along with the scarlet fever, and of these two died. There were eleven cases of pure diphtheria treated, of which one died. Fourteen had scarlatinal nephritis, and of these four died. In all cases the pilocarpine was given by hypodermic injection, and was combined with ether to avoid the risk of exhaustion. The dose varied from about $\frac{1}{18}$ m. to $\frac{1}{7}$ m. of a grain. Given in this way (hypodermically) its action is much more prompt and decided. According to the writer, pilocarpine is only useful in relieving certain symptoms and complications which are troublesome and dangerous. He does not think it has any specific action on either diphtheria or scarlet fever. It does not always tend to relieve the nephritis, nor does it invariably relieve or prevent uræmic poisoning. Its value should not, however, be under-estimated. It is useful in relieving the general disturbances of secretion by virtue of its diaphoretic, diuretic, sialogogue and expectorant action. He mentions the cases

of three children who suffered with diphtheria and scarlet fever combined. The temperature was very high, and there was furious delirium in each case. In all three of these cases, pilocarpine injections gave most excellent results; the temperature fell, the skin became moist, and a copious eruption made its appearance.

Similar good effects were observed in cases where the scarlatinal eruption was slow in appearing, and when there were cerebral disturbances. In these cases, the capillaries of the skin were dilated and a copious perspiration appeared. He thinks that the copious perspiration was the means of carrying off the scarlet fever from the blood.

With respect to diphtheria, he thinks the "expectorant and sialagogue action of pilocarpine causes a disappearance of the diphtheritic membrane, in all cases of pure diphtheria, in a few days." It softens it so that it can be more readily coughed up; but he advises that disinfectant gargles be used simultaneously. He has to acknowledge, however, that in some cases this treatment, like every other, is useless.

With reference to scarlatinal nephritis, he says his observations have led him to the conclusion that pilocarpine is not useful in all cases, and may be positively injurious in some. In the early stages of the affection, he warns against its use; but in the stage of desquamation, he has found it to exert a most happy effect. Of the four cases of nephritis which terminated fatally, two died from uræmic poisoning and two from complications (pericarditis and œdema of the lungs).

The Use of Iodoform in Tubercular Affections.—By Dr. B. Küssner (*Deutsche Med. Wochenschrift*, Nr. 17, 1882.) The author in the present paper, gives an account of his investigations as to the value of iodoform in tubercular affections of the larynx and lungs. With respect to its use in laryngeal phthisis, he states that he has seen numbers of cases get well under its use; and not only those in whom the disease was mild and the ulcers superficial, but also much more aggravated ones, where the ulcers were deep and there was much perichondrial swelling.

At first he pencilled the larynx with a mixture of iodoform and glycerine, in the proportion of 1 part of the former to 10 of the latter. Subsequently, he blew the powdered iodoform on the diseased surface with a common powder blower. This was done once a day. He advises, also, that the iodoform be administered by inhalation three or four times a day, according to the following method: Ten ccm. of a 10

per cent. solution of iodoform in alcohol, is placed in the glass receptacle of an ordinary inhaling apparatus, and to this is added twenty ccm. of water. It is the "emulsion" thus made which is used as an inhalation. A pure alcoholic solution is too irritating; and though iodoform is very insoluble in water, Küssner states that the "emulsion," as he calls it, made in the manner stated above, has given him good results.

Under the use of iodoform, he has seen characteristic tubercular ulcers of the larynx heal; and he thinks that the agent not only exerts an antiseptic action, but it also has a *specific* effect in tubercular cases.

With reference to its use in cases of pulmonary tuberculosis, when the larynx is not involved, he states that while it is, of course, very difficult to judge of the effect of any remedy in this disease, unless the patient can be kept under observation for years, still he has seen inhalations of iodoform cause a diminution of cough and expectoration, and also an entire disappearance of hectic fever. "Of course," he says, "this is not to be expected in all cases;" and he cautions his readers against the view that it is a specific in the sense that *all* cases are cured by it. This was claimed for benzoate of soda a few years ago, and the hopes to which such claims gave rise were very soon dissipated.

Occasional failures of the treatment, however, do not, he thinks, disprove the theory that iodoform has an anti-tubercular action; and he refers to the fact, that the antiseptic treatment of open wounds frequently fails because the agent used is not brought directly in contact with every part of the injured or diseased surface. The impossibility of bringing the iodoform into contact with every diseased spot in the lungs, will readily be conceded; and it is to this circumstance that Küssner attributes the failure of the treatment in some cases.

Proceedings of Societies.

Baltimore Medical Association.

[Specially reported for the *Virginia Medical Monthly*.]

Christopher Johnston, M. D., President, in the chair.

The Association was called to order at 8:30 P. M., twenty members being present. After the transaction of routine business, Dr. John Morris reported two cases of—

Septicæmia in the Puerperal State.—The *first* was that of an

unmarried lady who had an abortion produced upon her by some unknown person. Three weeks afterwards hæmorrhage came on, followed by septic fever. At this time Dr. Morris examined her and found the placenta within the uterus, and the os patulous. Hot water injections were ordered, and the next day the placenta was removed by the placental forceps, and she recovered.

The *second* case was that of a lady who, four days after her confinement, had a temperature of 102° , and pulse of 130-140. A horrid odor was encountered on entering the house. The os was patulous, and within it was about two inches of the membranes. This was withdrawn without difficulty, and hot water carbolized injections were ordered. About two weeks have elapsed since, and her progress towards recovery has been good.

Dr. Ellis had attended this case and had removed the entire placenta, and had taken particular care to get away, as he supposed, all the membranes.

Dr. Ashby said that antiseptics would not only have prevented septicæmia, but would have washed away, at the same time, any portions of the after-birth. Any rise of temperature about the third or fourth day should make us look out for such accidents. With antiseptic precautions they should be rare.

Dr. Monmonier said that retention was much more common than was supposed. It was indicated by unpleasant odor about the room. A lady was annoyed for some time after her confinement by uterine hæmorrhage. On examination, a portion of the membranes was found just inside the os, yet there was no septic poisoning. For some years he has been in the habit of administering one drachm of fluid extract of ergot just previous to delivery. He is also extremely careful to see that no portion of membranes is left behind. He does not find antiseptics necessary unless there is an offensive odor, and his own case showed that retention could exist without marked odor. He referred to a case in which an inch of the circumference of the placenta presented a semi-cartilaginous condition (fatty degeneration), as though it had separated and afterwards united again. In some of these cases he had found calcareous deposit.

Dr. Ellis found that women objected to the use of the syringe. We are compelled to respect their objections.

Twin Labor.—Dr. Neff reported a case of twins in which both children were extracted with the forceps. After the delivery of the first, he found an unruptured sac and head

presenting, accompanied by proper hæmorrhage. The placenta was the largest he had ever seen. Both children were boys.

Dr. Frank reported the continued improvement of his case of *abortion followed by Bell's Paralysis and Meniere's Disease*. The right drum had closed entirely.

Some Effects of the Rheumatic Diathesis.—Dr. Kemp opened the discussion of this subject with a paper. (Published in the present number.)

The following resolution, proposed by Dr. Gilman at a previous meeting, was indefinitely postponed :

“*Resolved*, That as a sanitary and economical measure, as well as a sympathetic procedure, cremation is, by far, to be preferred above any other mode of disposing of the body after death.”

Analyses, Selections, etc.

Stomach Tube in Children's Convulsions—Dr. Wm. A. Byrd, of Quincy, Ill., supposing that most convulsions in children are due to their eating too much or partaking of improper food, thought of the stomach pump as the natural means of relief—when impossible to give an emetic. The doctor always carries with him [a first-rate suggestion, too] a common soft-rubber tube, a third of an inch in diameter, to use as tourniquet, stomach tube or anything else that it could be used for. In a short while after determining on the use of this plan of treatment, a boy, age six years, was taken with convulsions, and the doctor found him in profound coma, eyes half open and turned back, froth from mouth, jaws tightly clenched, head thrown back, breath “sour,” face purple, breathing slow and stertorous. The tube which the doctor usually carries, mentioned above, was passed with difficulty into the stomach. The stomach was first filled with warm water by means of an ordinary enema syringe, using the tube introduced into the stomach as a medium. The cyphon principle was adopted in filling the stomach. By lowering the basin in which the outer end of the cyphon was introduced, the stomach was emptied. Several repetitions of this procedure made the patient vomit a mass of apple peelings, as much as the size of the doctor's fist. He then injected a 10-grain solution of potassium bromide, with a few drops of laudanum, through the stomach tube. After

withdrawing the tube, the boy went to sleep, and awoke in the morning all right. In another case, a large quantity of pop-corn was similarly dislodged, which was the cause of the convulsions. Another case—girl, with severe spasms. By same method, oleander seed were brought up. Remedies had to be used through the stomach tube for two days. She recovered in a week—the delay being possibly due to oleander poisoning. Where there is much sourness of the stomach, a solution of soda bicarbonate, with which to wash out the stomach, and then a drink of water, then sedatives should be used and the stomach tube withdrawn. The insertion of the tube is easy. Let the tubing be more than two feet long, and have a syringe that will fill the tube. If without syringe, immerse the tube in water until it is full, and double the external end on itself, and pass through a ring, or let it be so tied as to hold it in a kink. The other end can then be easily held per orem in the stomach. This method was suggested by the late Dr. John T. Hodgen, years ago, in cases of poisoning, and most of the cases of convulsions in children are, in reality, cases of poisoning.

Bismuth in Dyspepsia of Children.—E. W. Dunbar, M. D., of Zurich, M.K.Q.C.P.I., in the *Practitioner*, for September, 1882, says: Loss of appetite in children with pain after eating, nausea, and depression, if accompanied by a tongue either clean or slightly coated, but showing redness and enlargement of the papillæ fungiformes, is quickly relieved by administration of bismuth, either in the form of the subnitrate or of the solution of the oxide in ammonia and citric acid, as discovered and prepared by Mr. Schacht. The dyspepsia, which is characterized by the described appearance of the tongue, is produced by indigestible food. If the tongue is coated, the dyspepsia is recent, and it is chronic and of some duration if the tongue is clean—loss of appetite and consequent diminution in the amount of food taken having given opportunity for the tongue to clean.

The digestion of children being easily disturbed, this form of dyspepsia may very frequently be observed among them. It is often necessary to persist in the use of bismuth for several weeks before the papillæ fungiformes resume their normal appearance and a lasting cure is effected, although improvement shows itself quickly in the appetite and returning liveliness and cheerfulness of the little patient. The action of the bowels is, as a rule, markedly improved and more regular, especially if the liquor bismuthi is used; exceptionally,

the bowels are rendered more constipated, and it is necessary to give a mild aperient occasionally.

While testing the accuracy of the described indication for the use of bismuth, I prescribed it, owing to the state of the tongue, in the case of a child who had an obdurate cough that had resisted all the usual remedies for subduing irritation of the larynx. The cough ceased with the improvement which quickly succeeded the dyspeptic symptoms. The dullness and languor produced by this form of dyspepsia in children may easily be mistaken, especially if the tongue is clean, for weakness and a condition requiring tonic treatment. The marked distaste for food and the characteristic tongue point to the true nature of the ailment.

The dose of liquid bismuth varies from two minims under one year of age to three, five, ten, fifteen and twenty minims up to twelve years of age; the dose is to be repeated twice or four times a day according to the severity of the symptoms. The remedy appears to be most effectual when taken after meals. The subnitrate may be given in doses of one-half grain up to two, three and five grains.

Bismuth is quite ineffectual in the dyspepsia of children where the tongue is smooth, clean, and shows no enlargement or redness of the papillæ fungiformes.

Ophthalmic Aphorisms—Dr. J. J. Chisolm, of Baltimore, gives the following valuable aphorisms in a report represented to the Maryland State Medical Society at its last session:

1st. APHORISM.—*Do not blister.* In forty-nine applications out of fifty, as I find it used by physicians at large, it is an additional and useless torture to the eye disease from which the patient is already suffering.

2nd. APHORISM.—*Do not use nitrate of silver.* As constantly prescribed by general practitioners, it is not beneficial in one case out of one hundred, and therefore is a very painful infliction to the ninety-nine who would have been so very much better off without it.

3rd. APHORISM.—*Do not prescribe sugar of lead.* In every case zinc, tannin or alum is better, and then there is no fear of having insoluble deposits incorporating themselves with the exposed surface of corneal ulcers.

4th. APHORISM.—*Always use weak solutions of the mineral and vegetable astringents* in the treatment of the eye inflammations which attack the mucous surfaces, and restrict their application to conjunctival diseases exclusively. One grain of alum, sulphate or chloride of zinc, sulphate of cop-

per or nitrate of silver, in an ounce of water, will, in the majority of cases of conjunctival diseases, do much more good and give much less uneasiness than the very painful five and ten grain solutions which are so often injuriously prescribed by physicians.

5th. APHORISM.—*Solution of the sulphate of atropia*, from one to four grains to the ounce of rose water, is an essential eye-drop in the treatment of acute iritis, to break newly formed adhesions. One drop of the atropia solution in an inflamed eye is a most valuable means of establishing the diagnosis whether iritic complications exist or not, and should be used in most cases of eye inflammation to find out whether there are any adhesions of the pupil to the lens.

6th. APHORISM.—*Eserine in solution of one grain to the ounce of water* is the remedy for purely corneal lesions.

7th. APHORISM.—When physicians are in doubt as to the character of an eye disease, they should seek a consultation from specialists who are more familiar with eye diseases than general practitioners can possibly be. Such timely aid often saves the patient a lifetime of trouble.

If physicians would commit to memory and keep at their finger ends, and ready for use, these simple aphorisms, the amount of mental and bodily suffering which they will prevent in their eye patients is beyond calculation. While all good rules have exceptions, they may safely follow their simple guidance.—*Nashville Jaur. Med. and Surg.*, Sept. 1882.

The Administration of Chloroform.—The *Gazette des Hôpitaux*, April 2, at the end of the *résumé* of the prolonged discussion on this subject, which has just terminated at the Académie de Médecine, gives the following account of the rules of procedure observed by a *collaborateur* who has been much employed, with constant success, in the administration of chloroform during the last ten years:—(1.) The compress is to be preferred to all other means; a handkerchief is to be had everywhere, and alarms the patient less than anything else. (2.) Fold the handkerchief into the form of the mouth of a horn, and keep it closely pressed against the point of the nose; but only pour the chloroform on the part of it which is not directly in contact with the skin. (3.) Its application should be intermitted, but this need not be done in the precisely regulated manner recommended by Professor Gosselin. (4.) Give very little chloroform at the commencement, in order to accustom the patient to it and prepare him for the feeling of suffocation. Then, when the first inspira-

tions are over, pour on the chloroform very often, otherwise much time will be lost and complete anæsthesia obtained only with difficulty. (5.) Before commencing the application take care that no article of dress constricts the patient, removing even the string of a cap. (6.) Expose the epigastrium, and from the very commencement keep the eye on it and *constantly* watch the respiration without caring about the pulse. (7.) Always have a forceps within reach. (8.) As soon as the respiration becomes noisy and stertorous, remove the compress and allow the patient to breathe fresh air for a time. (9.) When respiration is arrested, seize the tongue with the forceps and draw it out, and immediately commence artificial respiration. If the respiration is not re-established after a few seconds, place the head low, forcibly flagellate the cheeks, keep the tongue out, and continue the artificial respiration for five, ten, fifteen, or even twenty minutes, if necessary. (10.) When the respiration is noisy, pass into the back of the throat a sponge mounted on a forceps, in order to remove the mucosities existing there—as they frequently do in patients suffering from colds. (11.) There is but one contra-indication to the employment of chloroform, viz., advanced phthisis. Affections of the heart are not contra-indications. (12.) Hysterical subjects should be distrusted. (13.) Alcoholic subjects are very tedious and difficult to bring under the influence of chloroform, but they are not dangerous.—*Med. Times*, May 13, 1882—*Practitioner*, Sept., 1882.

Hydrophobia Successfully Treated with Pilocarpin.—Dr. Denis-Dumont communicated to the Paris Academy, on the 13th June, a report of a case of hydrophobia which he had treated and cured in the Caen Hospital. The patient, aged 38, had been bitten on the 16th April by a mad dog which had bitten two other persons also. One of these died with all the symptoms of rabies on the 20th May. On hearing of this Dr. Dumont's patient became excited, was seized with intense thirst and pharyngeal spasms, and tried to bite those who came near him. He was placed by himself in a room of the hospital and became restless and dejected. He was seized from time to time with convulsive spasms and uttered hoarse cries. Though he demanded drink he rejected it spasmodically as soon as he got it into his mouth. Morphia was injected subcutaneously, and enemata containing a drachm and a half of bromide of potassium administered. At this stage the bite-wound reopened. He complained of violent

pains in his throat, and begged the bystanders to kill him. Some time afterwards recourse was had to hypodermic injections of nitrate of pilocarpin thrice a day; whereupon calm was gradually restored, and the man was ultimately discharged, perfectly well.—*Progrès Méd.*, June 17, 1882—*Practitioner*, Sept., 1882.

Book Notices, &c.

Slight Ailments; Their Nature and Treatment. By LIONEL S. BEALE, M. D., F. R. S., F. R. C. P., Professor of the Principles and Practice of Medicine in King's College, London, etc. Second Edition. Enlarged and Illustrated. Philadelphia: P. Blakiston, Son & Co. 1882. Pp. 283. Price: Paper, 75 cents; Cloth, \$1.25; Extra, \$1.75. (From Publishers.)

It may seem curious that so eminent an author as Dr. Beale should write a book on "Slight Ailments." A little reflection will show, however, that it requires a man of much experience to write such a book; because the whole work must be culled from the experience alone—there are no authorities from whom to gather materials. When we see such a book, at once the thought occurs, "Here is a book telling how to treat a *bad cold, sick headache, nausea, constipation, neuralgia, vertigo*, etc., etc." And such are just the kinds of "Slight Ailments" treated of by the author. The tongue may be considered as the mirror of the state of the stomach, and, in many cases, of the whole system. Dr. Beale devotes some twenty-five pages to this important organ, giving its various coatings, appearances in different diseases, and a description of its gross and microscopic anatomy. In treating of offensive breath, he recommends that we strike at the root of the evil and correct the cause, by setting the liver to work, regulating diet, etc. In case mercury cannot be given to the patient, one of the various salines may be employed. A very common "slight ailment," and one often quite puzzling to the young practitioner, is *heartburn*. Many patients subject to this disagreeable affection frequently reject from the stomach a large quantity of clear liquid. [If this is tested with litmus it is found to be alkaline, an indication that it comes from the cardiac glands of the stomach, of which the secretion is alkaline.—ED.] They complain that this fluid burns them, or tastes salty or mawkish. The diet must be regulated; purgatives may be necessary; preparations of rhubarb are especially recommended. It is often

caused by the ingestion of too much food. The author says that it is often useless to give alkalis, and gives good reasons therefor. One of the worst cases that the writer ever saw was cured by the effervescing bicarbonate of potash given half an hour before meals. *Constipation* is an enemy which the practitioner meets at almost every turn. The author discusses this subject quite fully, and gives very many valuable hints for its relief. It may be said that scarcely any civilized person has escaped this disagreeable companion. Dr. Beale evidently believes more in the hygienic and dietetic, than in the medicinal treatment of constipation. *Exercise*, the *cold bath*, *kneading the bowels*, *diet* are treated of, with the advantages of each. Constipation often gives rise to the seemingly opposite condition of diarrhœa. The author says that an occasional attack of diarrhœa in persons suffering from constipation is advantageous. Our experience is, however, that, as a rule, this diarrhœa does not empty the bowels, but just keeps up, as it were, a disagreeable "drizzle," to the great annoyance of the patient, and is best treated by purgatives. When a person complains of swimming in the head—"vertigo"—and pain in the heart, we may be tolerably certain that that person's stomach or liver, or both, are out of order. The author mentions these facts, and at the same time describes the other affections which may cause it, and gives the proper courses of treatment. The ambiguous term, "biliousness," has been used to cover ignorance about as often as any other word in the English language, and the author very properly says: "Whether there is congestion of the liver in all cases, I cannot say, for I never saw a *post-mortem* of any one who had died during an attack of 'biliousness.' Nay, bilious people are for the most part long-lived. Some physicians who have experience in connection with life insurance business, so far from objecting to take bilious people, are desirous of insuring them." [American insurance companies please take notice!]

We mention last, a most distressing and annoying ailment, which, however, is seldom "slight"—*sick headache*. The fact that they gradually diminish in severity and frequency as age advances, is a grain of comfort to the sufferer in the intervals between the attacks, but is little consolation during one. Beside derangement of the stomach and digestive organs generally, the author thinks that in some cases the derangement begins in the large intestine. [*Physiologically*, the writer does not think that the large intestine is a part of the *digestive* organs. It is a receptacle for the fæces, and

only belongs to the digestive organs *anatomically*.] He also mentions the fact that "when an attack of sick-headache begins to pass off, urine, often loaded with deposits of urate of soda., etc., and of high specific gravity, is excreted." Cases of sick-headache, in which the urine contains sodium urate, are almost invariably due to gout; it may be without any joint affection, but in many cases the joints will be affected later, say in twelve or twenty-four hours. The writer has a case prominently before his mind, in which attacks of gout have been preceded by a violent sick-headache, urine loaded with urate of soda, and the foot affected subsequently. But it is useless to reprint the book in the form of a review. Dr. Beale has shown that while writing standard works on the microscope, he has not been unmindful of the "Slight Ailments" of the human race, and that he knows how to treat them.

Sore Throat; its Nature, Varieties and Treatment. Including the Connection between Affections of the Throat and other Diseases. By PROSSER JAMES, M. D., Physician to the Hospital for Diseases of the Throat and Chest. Fourth Edition. Enlarged. With Colored Plates and Engravings. "Hand-Book" Series. P. Blakiston, Son & Co. 12mo. Pp. 318. Paper, 75 cents; Cloth, \$1.25. (From Publishers.)

This work appeared in 1860; was the only English book on the laryngoscope for three years, and written by the first English worker with that instrument. The chapter on the anatomy of the throat possesses the rare merit of clearness without tediousness. That on diagnosis gives a concise and clear account of how the laryngoscope should be used, and what is seen while using it. Before discussing the diseases of the different organs, the author describes certain details of *general* treatment of sore throat. Here, we are glad to note, that scarification is much preferred to blood-letting or leeches, and "that emetics should be confined in diseases of the throat to the important rôle of their mechanical action;" that aconite is regarded as a valuable remedy given in small doses, frequently repeated. Several pages are devoted to the subject of inhalations, atomized fluids, sprays, etc., with a description of the various methods of employing the different drugs employed for this purpose, and a detailed account is given of *laryngoscopical* therapeutics, the manner in which liquids, solids, caustics and electricity are used. Membranous croup and diphtheria, though described separately, are both included under the head of "Exudative

Sore Throat." The author agrees with Steiner in thinking leeches are of no benefit in croup. He reiterates what has already been said of emetics, viz.: That they should be used only for their mechanical action—"not as antiphlogistics or revulsives, still less as specifics." Among others, he reminds us of the emetic properties of hypodermics of apomorphia. The chapters on "Syphilitic sore throat," "Throat deafness," "Affections of the naso-pharynx" and "Affections of the œsophagus" are new and well written. In fact, the whole book is written in a plain, easy style, unencumbered by the technicalities, tedious references and high-sounding untenable theories that weary the brain; and, as an everyday book for the general practitioner, is excellent.

W. G. E.

"Hand-Book of the Diseases of Women" By ALFRED LEWIS GALLABIN, M. D., Assistant Obstetric Physician at Guy's Hospital, etc. With sixty-three Wood Engravings. Philadelphia. P. Blakiston, Son & Co. Paper, 75 cents; Cloth, \$1.25.

If the author had been hitherto entirely unknown, this book would at once entitle him to a place among the "authorities." The first twenty-five pages are devoted to physical diagnosis, a most important part of gynæcology, for in this department it is useless to tell one what he may see unless he is instructed *how* to see, and what to look for. A superficial glance at the work will show that the author is not afraid to express his opinion. A closer examination will prove that on important points he is supported by the highest authorities. An especial merit of the work is that the author is fully up with the American practice of gynæcology, recommending American instruments and methods of treatment, and never fails to give his meed of praise, where it is due, to an American author.

W. G. E.

PAMPHLETS, REPRINTS, ETC., RECEIVED, for which we have no room for further notice; but most of which can be obtained by enclosing a letter stamp for each pamphlet to the respective authors named.

Statistics of Ovariectomies. By WM. GOODELL, M. D., Philadelphia, Pa. Reprint from *American Journal of Obstetrics and Diseases of Women and Children*, April, 1882. 8vo. Pp. 10. [Dr. Goodell never refuses to operate for ovarian tumors—thus giving the afflicted woman her only chance for life. His statistics cover 61 cases of ovariectomy, which are well tabulated for instructive reference.]

Editorial.

Medical College of Virginia.—We purposely avoided making allusion, in our last issue, to what is styled in this community “the Medical College muddle.” Our object has been, as it is now, to help build up the broken down fortunes of this institution, whose reputation was “glorious in another day.” But now that the session of 1882-3 has been in progress for about a month, and as no remark we may make in this editorial can materially add to, or detract from whatever of success it may achieve this year, we propose to give, briefly, the facts which led to the present complications, with some remarks based thereon, hoping that good may result to the College in after time.

To clear away one item at the start, a report has been circulated in this community to the effect that certain doctors, whose names have been used in the public prints, “without their knowledge or consent,” as members of a proposed new Faculty, have even changed their political views. Such a report is totally unfounded, and has evidently grown out of the adroit use of language which misleads the careless or hurried reader to form such an impression. Further than this, some of the names of practitioners which have appeared in the newspapers, as favoring a thorough reorganization of the College, have no personal desire to be Professors in the institution; and were they to accept the place at all, it would be only to comply with the wishes of others who might think their services specially required for the good of this State medical institution.

About September 20th, Governor Wm. E. Cameron appointed a new Board of Visitors for the College, with the request to organize on September 29th. Two of the old Board (of nineteen) were retained on the new one. A meeting of the *old* Board was immediately called; but during its session on September 26th or 27th, nothing of special importance seems to have transpired.

On September 29th, some thirteen or fourteen of the new Board assembled in the back portico of the College, but found the doors locked. Two Professors were on the grounds, but declined to surrender the keys. Lieutenant-Governor Lewis was then elected President, and Dr. Lewis Wheat was nominated as Secretary of the Board. At this juncture, Prof.

Wellford called on some city policemen (who had been requested to be present) to arrest these "illegal proceedings;" but before an arrest was made, Dr. Wheat was elected Secretary, and the Board was declared duly organized. Lieutenant-Governor Lewis was designated by the Professors as the party to be taken in custody. He submitted without resistance, nor was any threat of violence made upon either person or property. He was conducted by the policemen through the streets of this city to the First Police Station, accompanied by a number of the Board. After arriving at the Station, some telephoning occurred. The Chief-of-Police soon came in, and shortly afterwards, Professors McCaw and Wellford arrived. Some inquiries were made of these Professors, and, by their own acknowledgments, the case was seen to be so plainly one of false arrest, that the Chief-of-Police at once ordered the release of the prisoner. The Professors did not even have the authority of the old Board (that, just a day or so before, had a meeting and was fully cognizant of the intention of the new Board to organize) to act in the matter. If such causeless and confessedly illegal arrest and indignity offered the Lieutenant-Governor of the Commonwealth are not rebuked in due time by proper legal redress, we will be surprised. The unauthorized presence and action of the policemen in this matter recall to memory the "hard times" in South Carolina some years ago, when Grant's bayonets were stationed in the Capitol for the purpose of awing brave men from performing their duty.

The Board, however, acted with commendable conservatism, so far as relates to the unwarranted indignity offered their President; nor was any change recommended as to the composition of the Faculty for the current session. But a resolution was adopted which, in effect, directed the Faculty to let the present lady management remain in charge of the "Retreat for the Sick." In a day or so afterwards, the Faculty very properly revoked their resolution adopted last spring, which required the ladies to vacate the building about November 1st. Thus an important point for the good of the sick of this and other States has been secured by the new Board, and that even without contest. If the Faculty had heeded our kindly intended advice, given some months ago on this subject, this now almost compulsory surrender, or very sudden change of action, on their part, would not have been required at this time.

The new Board is to meet again January 5th, 1883, when

some other matters will probably be acted upon, which will force upon the Courts a decision of the question as to the authority of the Governor to displace the old and substitute a new Board of Visitors. For instance, Dr. O. F. Manson has resigned his Professorship—tendering his resignation to the *new* Board. The Faculty has called a meeting of the *old* Board in November to elect his successor. Of course the new Board will not recognize the right of the old Board to act for them, and hence a test-case for the Courts will arise at once. We have no idea what the result will be. Some eminent lawyers assert that the Governor has no right to remove the old, and substitute a new Board; while other lawyers, of equal ability, on both sides of the present politico-party line, are reported as stating that he has the unquestionable right to do as he has done.

Leaving such matters to judicial decision, and without discussing motives which have been attributed to the Governor for his action, further than to re-affirm what we have years ago editorially stated—that politics should not enter into the consideration of medical appointments, etc.,—we will refer briefly to a few facts or statements which convince us that there *ought* to be a re-organization of the *old* Board—even if the present Faculty is retained by the re-organized Board.

We speak reverentially of the distinguished President of the old Board who, in days gone by, has been of eminent service to the College. But the infirmities of age have at last so affected his health that, although a resident of this city, he is no longer able to attend the meetings of the Board to give the benefits of his counsel. Another member of the Board, also a resident of this city, in a recently written note to the Governor, states in substance, that his ministerial duties are so engrossing as not to permit him to devote that attention to the College affairs which he thinks should be bestowed by a Visitor. It is well known there are several of the old Board—not residents of the city—who have not attended a meeting for years, if indeed there are not some who have long been members who have not been present at any meeting. If such statements be facts, *ought* there not to be a re-organization of the *old* Board?

When the former Professor of Chemistry was prevented by the nature of his prolonged fatal illness from performing his Professorial duties, those duties were performed by Dr. Wm. H. Taylor; and for a year or more after Dr. Peebles' death, he "lectured" on chemistry only by authority of the

Faculty, before a quorum of the old Board was assembled to give him the well-deserved title of Professor. Dr. Taylor, as the Profession of Virginia knows, is one of the few competent men in the State able to teach chemistry. If the *old* Board is to be so negligent of a plain and important duty, *ought* it not to resign, or else submit to displacement?

Upon the resignation of any distinguished Professor of regular medical colleges in this country, it is customary that such party be honored with the title of *Emeritus Professor*. But Drs. F. D. Cunningham and Hunter McGuire—both ex-Presidents of the Medical Society of Virginia, and possessing professional influence of a wider extent, we dare affirm, than all the members of the present Faculty combined, and whose connection with the College benefitted it—have not, to this day, been recipients of the complimentary title of *Emeritus Professors*. Such oversights—if the omissions to conform to a custom so generally adopted in regularly organized colleges were oversights—should be corrected. It rests with the Board to make the *amende honorable*.

It has lately been stated in a city newspaper that one of the Professors has claimed to have enough personal influence with members of the old Board—either by family relationships or long standing personal friendships—to control, in great measure, its action regarding most questions that might come before it. This is a dangerous power to yield to any one man. If such power rests in the hands of one Professor, *ought* not the old Board to be re-organized?

About a year ago, attention was called to some financial irregularities, so far as related to reports showing how the State's annual appropriations were expended. When this subject was up before the State Legislative Committee of last winter, some degree of negligence of duty was confessed; but up to this date, if we are properly informed, satisfactory vouchers have not been filed with the Auditor, as the law for ten years past has annually required. And while the character of the Faculty is a guarantee that no malfeasance is chargeable, it nevertheless is due to all parties concerned that a yearly settlement should be made in the form required by law and usage in such cases. If the *old* Board does not hold those who are responsible to account in such matters, *ought* it not to be substituted by a Board that will do so?

Have we not said enough to convince an unbiased mind that the *old* Board of Visitors should be re-organized, and a wide-awake, active, progressive Board substituted? How uncalled for, then, was the discourtesy offered by the Faculty

to Dr. Lewis Wheat during the last Commencement exercises, in excluding him from the stage and preventing him from awarding a prize to one of the graduating students? Dr. Wheat himself is an alumnus of the College, was an adjunct to the chair recently filled by Dr. Manson, at whose request he was about to award the prize. But he was forbidden from conferring such a compliment by the other members of the Faculty assembled on the stage, just as the exercises were about to begin. In a recent card published in a daily paper, the Faculty deny that political differences of opinion actuated them, but they objected to his taking so prominent a part in the exercises of the evening because he had, last winter, exerted himself in the Legislature to secure a re-organization of the College.

We leave the matter, for the present, to our readers, to decide whether or not there *ought* to be a *re-organization*. We have sought to mention only some of the facts which have inclined our conviction to answer the question in the affirmative.

If our conclusions be legitimate, from the premises laid down, which we have tried to form from the standpoint of *right*; and if there exists no authority to alter a practically self-perpetuating Board that has been guilty of so many errors and omissions, is there not a fault in the law? It is simply idle foolishness to speak of "politics" as governing such matters. That party is right which does the right; and, recognizing "the powers that be," there is no other redress for a wrong, of a public character, than to appeal to the existing authorities to remedy it. It is ridiculous to wait for a year or two to correct an error or an evil which may possibly be remedied at once. How silly it would be, for one raised in, and a believer of the Christian religion, to assert that he would not receive the Christian faith on his dying bed because the *truth* was told him by parties for whom he had no personal fondness or friendship! If there be need for such a recourse, "learn from your enemies;" and do not get mad with them because they are following the proper course. Let not "politics," as understood in this day, enter into the decision of scientific questions; but it should also be recollected that legislative actions can be secured only by the preference being given, as to patrons of a "bill," to the controlling party at the time the object in view is sought to be accomplished.

There was a weakness of a kind we will not characterize on the part of some politicians in the late Legislature, who, after conceding that the facts presented to them were plausi-

ble, and the propriety for re-organization of the College was evident, yet "went back" on their convictions, and determined to vote contrary-wise, simply because some selfishly disposed parties had succeeded in imbuing them with the idea that the scheme was one devised by the opposite party. It was well-known that most of the "lobbyists" who advocated a re-organization of the College were of the same political faith as those of the profession who opposed the movement.

There were evident efforts to make this matter a political one, when there was, and is no political significance whatever in the proceedings by those who entertain views we are persuaded are right. "Do no wrong that good may come of it;" and then there will never be occasion to change one's line of conduct or politics.

The Toy Pistol.—Our young folks must have amusements. The intelligent parent will not overlook this fact. It is no use to disguise the fact that boys and girls have a penchant for making noise, and gathering joy therefrom. Let the parent fairly acknowledge the proclivity and the necessity. The truth is on the surface that too few fathers take interest in the sports of their children. In out-door sports few mothers are good advisers, and the fathers forget that skating, swimming, boating, shooting, kite-flying, are not luxuries, but *necessities* for boys. The mother half performs her duty when she gives her daughter a hoop, a jumping rope, and a dancing teacher. Would it not be wise for parents to give daily attention, even for a few moments, to the sports of their children? The carelessness of parents during the past decade has made it possible for the introduction of that deadly toy pistol. It may be found in every toy shop, and an eager child with a nickel or two easily becomes a patron of the toy pistol shop-keeper. The newspapers have been full of reports of cases of tetanus following the use of this deadly toy. Very properly several councils of our large cities have interdicted its sale. Many of our medical exchanges have called attention to fatalities resulting from injuries inflicted by this apparently innocent plaything. Just now, we refer to what the *Peoria Medical Monthly* (August, 1882) says:

"There are two forms of this deadly toy, both of which seem from the press reports to be equally dangerous—those exploding a paper wafer and those exploding a blank cartridge. The paper wafers contain fulminate of mercury and

chlorate of potassium, while the blank cartridges also contain a small amount of fulminating compound. This being the case, it is nearly safe to suppose that it is the mercurial salt which does the mischief, especially since it is stated that such compounds, introduced directly into the circulation, are active poisons." The *Peoria Monthly* further adds: "The subject should be so forcibly brought before every city council and legislative body in the country that united action prohibitory of the sale or use of these toys would be secured."

A correspondent from New York of the *Chicago Medical Review*, under date of August 13, refers to many fatal wounds from the toy pistol, and from many other sources, not including the reports from the non-professional press. We are forced to believe that the toy pistol, and the fulminate of mercury and chlorate of potassium cartridge or wafer, is about as deadly a plaything as a rattlesnake with thirteen rattles and a button. Let the children have playthings, but *not the toy pistol*.

The Scientific American has become a necessity to the American public. It gives no fair idea of its value to say that its weekly contents have interest only for the machinist, mechanic, or inventor. Its value is of far wider range, and the *Scientific American* should be in the library of the reading men of all pursuits. As an educator, let it be placed especially in the hands of the boys and young men of the country. It will stimulate investigation and inquiry on the part of youthful readers, and supply the oldest with information of great value.

Popular Science Monthly.—The October of this invaluable journal, finishing Vol. XXI, is already before us. No scientific student can dispense with this monthly, and it is difficult to understand how any one making literary pretensions fails to become a regular reader of this journal. The *Popular Science Monthly* meets a want of the medical profession not otherwise met. It keeps full pace with the progress of the times in all the departments of scientific pursuit. The number now before us contains a portrait of Virchow and a sketch of his life, and a table of contents, otherwise, most valuable. Address Messrs. D. Appleton & Co., New York.

The Transactions of the Medical Society of Virginia for 1882 will be published with the January number, 1883, of this journal, as in former years.

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Original Communications.

ART. I.—**On Sanitary Conditions in Relation to the Treatment of Surgical Operations and Injuries.** (*Read before the American Surgical Association, Philadelphia, May 31, 1882.* By JAMES L. CABELL, A. M., M. D., LL. D., President National Board of Health; Ex-President American Public Health Association; Ex-President and Honorary Fellow Medical Society of Virginia; Professor of Surgery and Physiology in University of Virginia, etc.

It is probable that, in selecting for discussion the subject of "Sanitary Conditions in Relation to the Treatment of Surgical Operations and Injuries," assigned to me by our honored President, reference was had exclusively to external and local conditions, rather than to individual peculiarities of temperament or constitution which exert an important influence on the results of operations. And yet, as some of these peculiarities may be the product of the hygienic conditions under which the individuals may have previously lived, and to which they may be exposed at the time of an operation, it may not be out of place briefly to notice some of them in this connection.

It was fitly observed by Mr. Erichsen, in his address on the opening of the Surgical Section of the recent International Medical Congress in London, that "in any discussion on the best methods of securing primary union in wounds,

we should not fail to recognize, in the general constitutional state of the patient, a most important factor in this direction; and we should be taking a narrow view of this many-sided question, if we did not give due weight to the influence of those hygienic conditions which, if faulty, are inimical or destructive to the due performance of those actions which are necessary for the maintenance of the organism in a healthy state, and for the proper nutrition and repair of the tissues of the body." "Is there not a fear," he asked, "that, in some of the modern systems of treating wounds, we are in danger of expending all our precautions in preventing local and ignoring the risk of constitutional infection."

I shall accordingly deem it not inappropriate to allude briefly, in the course of my remarks, to the modes, so far as they can be determined, by which the results of operations are influenced by peculiarities of each patient's constitution, mental and physical; and by the hygienic conditions existing before, as well as those which exist during and after the operation.

Eight years ago, Mr. Erichsen expressed the opinion that the science of surgery had not advanced proportionately with the art, and that the results of all operations, especially those by which life is imperiled, are not as satisfactory as they should be—the skill in the performance having far outstripped the success in the result.* It is probable that this distinguished surgeon would slightly modify this general statement if he had occasion to revise and re-edit his *Lectures on Hospitalism*. For trustworthy statistics show a marvelous recent diminution in the death-rate of operations involving abdominal section—notably, the operation of ovariectomy—a diminution due, in some measure, to improved methods of operative procedure, which have now probably reached final perfection; but in a yet larger measure to more careful and systematic attention to sanitary conditions, including the employment of antiseptic precautions during and after the operation. He would, doubtless, still affirm that "the mortality is excessive after amputations; that it

**Hospitalism*, by John Eric Erichsen, London, 1874.

has not materially diminished of late years, and is particularly great in hospital practice, where it is probably dependent on removable causes and hence might be materially reduced, if these could be determined and their recurrence prevented." He regards this continued high rate of mortality after amputations as very significant when contrasted with the decided decrease of the general mortality of London and many other large towns during the last third of a century. It seems to show that the "sanitary improvements in hospitals have not kept pace with that of the towns in which they are situated." It is probable that this reproach may justly be applied to many hospitals; but I doubt whether it can fairly attach to all city hospitals which may yet have a rather high rate for its amputation cases. There is an obvious source of fallacy in drawing such conclusions from the mortality tables.

The influences which determine the results of operations are so numerous and varied that it would be illogical to select any one of them—such as the locality in which the operations are performed—and attribute the results to that influence alone or chiefly, on the arbitrary assumption that if we compare a sufficiently large number of cases, all other influences may be made made to neutralize each other. Freedom from septic diseases would be a much more reliable test of the sanitary condition of a hospital than any derived from its mortality returns. "In every case of pyæmia, erysipelas and the like," says Sir James Paget, "we ought to work until we can discover its probable origin. We should have the strongest feeling that these diseases are not spontaneous nor inevitable." So far, therefore, as septic complications are concerned, formerly the most fruitful cause of mortality after operations, we have the best reasons for believing that they are dependent upon hygienic defects which are not inevitable, but may be removed by judicious sanitation.

Why then has not the mortality after amputations been reduced in a somewhat corresponding ratio with the marvellous diminution of the death-rate of ovariotomy? Is a death-rate of about 22 per cent. for all amputations above

the wrist and ankle the best that can be expected among those classes of the population who are the usual subjects of hospital operations? Or is this high mortality peculiar to hospitals, and a necessary result of occult unhealthy influences inseparable from the aggregation of sick persons, even when septic conditions are prevented? Such are some of the questions which must engage our attention as elements of the general discussion; and although it may not be possible to furnish a ready answer to them, the inquiry will not be without interest and value. We shall, at least, arrive at this negative conclusion, that an attempted comparison of the mortuary statistics of hospitals with those of private practice will not furnish a satisfactory solution of this problem.

The prime condition of the healthy repair of wounds is, of course, a fit state of the blood, which implies the due performance of the blood-making and blood-purifying functions, and thus has relation to whatever can affect the process of digestion, the absorption and assimilation of its products, and the elimination of waste material by respiration and the other depuratory processes. It involves the necessity of a regular and constant supply of fresh and pure air with abundance of sunlight, uncontaminated water for drinking, food of suitable quality, taken at regular intervals, in appropriate quantities, regulation of the action of the skin by attention to bodily cleanliness and by suitable clothing adapted to the exigencies of season and climate, a wise government of the intellectual and moral nature and such an adjustment of the general system to the condition of enforced abstinence from muscular exercise as may be necessary to maintain the healthy state of the other functions under the necessary restraints of the sick chamber. The importance of each and all of these factors of health is generally conceded in terms, but in actual practice some of them are overlooked to an extent that may perhaps have an important influence on the issue of a case of severe injury. It is not very unusual to hear the opinion expressed that the issue of a grave surgical operation, which has been well executed, depends mainly upon inappreciable peculiarities of the patient's constitution.

Before taking refuge in an explanation which rests upon confessed ignorance, we are bound to see that in any given case all the hygienic conditions that might influence the physiological processes connected with nutrition have been faithfully carried out.

First, as to the supply of fresh air: While the rule of Dr. Parkes gives for persons in health the very liberal estimate of 3000 cubic feet per head per hour as necessary to keep the atmosphere of an inhabited room within the limits of permissible impurity, he states that the wards in the London Fever Hospital were not free from odor when 3720 cubic feet per head per hour were passing in; and that in surgical wards, with patients having open wounds, the allowance must be considerably increased. When hospital gangrene, pyæmia or erysipelas are spreading, at least 6000 cubic feet must be given; or, in other words, the supply must be almost unlimited. For the protection of others, patients affected with septic diseases should be isolated. For their own protection they should have an unlimited supply of fresh air. The large experience of Sir James Paget led him to the conclusion that there was but one thing which he could call remedial for that form of blood-poisoning which is so often the bane of operative surgery, and that was a "profuse supply of fresh air." He declared that in the three most remarkable cases of cure he had seen, "the patients might be said to have lain day and night in the wind."

Dr. W. A. Hammond states that he thinks he has noticed that wounds heal with greater rapidity when sunlight is allowed to reach them directly, than when they are kept habitually covered; and adds, that Ribes makes a similar statement.*

The accuracy of this conclusion may fairly be questioned, in view of the overwhelming amount of evidence we now have of the rapidity with which wounds heal under certain kinds of antiseptic dressings, without having been once opened. But as to the general sanitary value of solar light to the sick and wounded patients, there can be no doubt,

*W. A. Hammond, M. D., Surgeon General U. S. Army. *Treatise on Hygiene*. 1883.

and it should be kept prominently in view in plans of hospital construction.

Florence Nightingale has made some admirable observations on this subject, which are well worthy of careful consideration. They will be found in both of her instructive little works, the *Notes on Nursing* and the *Notes on Hospitals*. This intelligent and generally accurate observer remarks in the *Notes on Nursing*, that "It is curious to observe how almost all patients lie with their faces turned to the light, exactly as plants make their way towards the light. A patient will complain that it gives him pain lying on that side. 'Then why *do* you lie on that side?' He does not know, but we do. It is because it is the side towards the window."

Little need be said as to the importance of "wholesome" water except this, that water which may be "usable" for persons in health, may be positively injurious for persons in whom incipient septic complications reveal themselves by gastric and intestinal troubles; and that, therefore, the quality of the water-supply, and the condition of the pipes as to the possibility of contamination with sewer air, should be a matter of almost daily investigation in hospitals. It is well known that limpid and sparkling water, perfectly agreeable to the taste, may yet be so affected with the specific poisons of some of the zymotic diseases as to become an efficient means of their propagation, and that we have no positive test of their presence except such as is derived from clinical observation. It has not been certainly demonstrated that water polluted with a small amount of non-specific organic matter in process of decay, is as potential a cause of disease as is generally and wisely assumed. But there is some evidence in favor of this conclusion; and some of the reasons which render it probable, apply with particular force to cases in which an extraordinary demand is made upon the reparative forces of the system, and when a small addition to the amount of impurities to be excreted may seriously derange the blood-purifying process.

The necessity of a supporting diet in the case of wounded subjects is now universally recognized, but beyond this broad

fact and the general principle that such diet should represent a combination of albuminoids, fat, saccharine matter and the blood-salts in proportions approximately equivalent to those in which they exist in cow's milk—itself an excellent diet for the early stages of severe injuries during the period of febrile reaction—there is not much to be said in the present state of our knowledge. It is probable that we have yet much to learn with reference to the judicious regulation of diet for wounded patients from day to day. In the opinion of as careful an observer as the late Dr. Parkes, “there can be but little doubt that the dietetic treatment of disease is destined to be the great work of the future.” In the mean time, until our knowledge is more advanced, and we can practically use the physiological facts now being gradually discovered, he thinks it may be a good rule in disease to consider the diet of health, if it can be taken by the patient, to be the best adapted for nutrition in disease, and that we should not deviate from this rule except on some intelligible and certain ground. One such intelligible ground in the case of the class of patients in a public hospital who have undergone severe operations by which life is imperilled, is to allow frequent deviations from the fixed scales of diet which must, of necessity, be enforced upon other classes of hospital inmates.

The well-known influence of the emotions over the quality as well as the quantity of the secretions, renders it more than probable that mental or emotional strain may exercise a potent influence for evil over the nutritive processes. This has often been noticed among the laboring classes in times of great financial disasters leading to the reduction of the wages of labor below the limit of a healthy support for a family, although in such a case the effect is not wholly due to mental depression, but in a large degree, perhaps, to deterioration of diet both in quantity and quality.

Again; the notable paradox of a better prognosis in amputations for long-standing disease than in those performed for recent injuries, may find a partial explanation in the opportunity which protracted disease gives for quieting that mental distress which is so overpowering in the face of a

great and unexpected disaster, and for restoring the harmonious balance of the animal functions which a sudden injury received by a person in vigorous health so rudely disturbs. "Such persons," says Paget, "have to give up many of the customs by which they sustained the health that was fit for pleasure or work. Especially they have to give up the active mental and bodily pursuits in which they excreted largely the refuse matter of their foods and their tissue waste." Moreover, they have to bear the shock of the injury as well as that of the disease; but we shall presently see that a particular mode of preliminary antiseptic treatment may avail to remove this last trouble, so far, at least, as that time is given for the entire subsidence of all the physical effects of shock before the operation is undertaken, while yet inflammation and traumatic fever are averted. This precious truce, which sometimes may be advantageously extended for a week or longer, may also be utilized for counteracting in some measure the effects of previous exposure to insanitary influence connected with bad hygienic surroundings.

It is the opinion of careful and judicious surgeons that "the majority of the preventable calamities of surgery are due to the oversight of personal defects in the patients operated on; defects in the habits, the constitution, or the previous diseases which ought to have been ascertained before the risk of the operation was incurred."* Sir James Paget, who makes this remark, cites a number of illustrative cases, such as the removal of a small cyst on the scalp being followed by fatal erysipelas in a patient who had unsuspected albuminuria, and an amputation of a finger followed by fatal spreading cellular inflammation in a person of intemperate habits, which were not inquired into by the surgeon. Many such examples might be cited to illustrate the truth of the general proposition that the result of operation and injuries are often more determined by conditions which precede, than by those which attend or follow their occurrence. But the general fact is too well known to need further remark. I only desire to say that when circumstances admit of delay in the case of an operation, the depressing influence of ante-

*Sir James Paget, *Loc. cit.*

cedent unfavorable sanitary conditions may be lessened by the substitution of a better hygiene before the operation is performed. Upon a proper regulation of diet, upon the personal cleanliness of the patient and the purity of the air which he breathes, will depend the decision of the issue as to whether the operation shall be followed by a safe healing process or by a low and diffuse form of inflammation, often the precursor of secondary manifestations of a fatal blood-poisoning.

If the antecedent insanitary conditions exert an unfavorable influence on the success of operations, how much more potent for evil they must be when they are continued during and after the operation. A man who, in tolerable health, might have resisted the injurious effects of close air and animal effluvia, will almost inevitably succumb to such influences acting upon a system prostrated by the shock of a severe injury. It is needless, therefore, to say that the most scrupulous attention to personal hygiene and to the hygiene of the house and its surroundings, especially in the case of large aggregations of persons in hospitals, is an indispensable condition of securing the best results in the treatment of surgical operations and injuries. Thus Spencer Wells, noting the variations in the relative mortality of ovariectomy in hospital and in private practice in the five groups of his first 500 cases, the advantage being sometimes for the hospital and sometimes for private practice, observes that it is well worthy of remark that the periods of good and indifferent results in hospital have corresponded with changes in its sanitary condition. After emptying the hospital for a month or more, and thoroughly cleansing, painting and lime-washing the walls, a period of almost uninterrupted success has followed. Then what was called "a run of bad luck" set in, clearly attributable to crowding, to some neglect in purifying bedding, or to contagion or infection.

The relative frequency of *shock* as a cause of death after amputations, is probably greater in private practice than in hospitals. Thus of 160 deaths from amputations in private practice tabulated by Sir James Simpson, the largest number, namely, 63, was ascribed to shock, 56 having been trau-

matic and 7 pathological amputations. On the other hand, Erichsen reports 21 deaths from shock out of 90 total deaths from primary amputations for injury, in four metropolitan hospitals; or a percentage of 23.33, as against 39.37 per cent. in Simpson's collection from private practice.

Out of 180 deaths after amputations in the Massachusetts General Hospital between 1823 and 1871, as reported by Chadwick, only 8, or the very small proportion, 4.44 per cent., are set down to shock. But it should be observed that 21 deaths, amounting to 11.66 per cent., are ascribed to "collapse," a term usually employed synonymously with shock. But even if all these were assigned to shock, the percentage would still be only 16 11, and ought probably to be increased, for it is stated that three deaths after primary amputation at the knee for injury were all from "exhaustion," one in two hours, one in one day, and one in twenty-three days. One would suppose that shock must have been an element of the exhaustion in the first two cases. But after making due corrections to allow a comparison with Simpson's tabulated cases, it still appears that shock, as a cause of death after major operations, is relatively less frequent in hospitals than in private practice, or at least that this was the case some years ago, when the hospitals were more liable to septic influences, which causing a large number of deaths, reduced the relative proportion of deaths from shock.

Notwithstanding the value, in other respects, of the researches of Brown-Séguard, Jaccoud and Weir Mitchell and his associates, Morehouse and Keen, the researches of modern pathologists as to the mode in which shock is produced have led to no practical results in respect of the prevention of this condition. Erichsen makes the suggestive remark that as in amputations death is not seldom due to unavoidable causes not connected with the operation, though not, perhaps, discovered until after it, so "shock," as an assigned cause of death after amputations, may be a cloak of ignorance and require explanation, whereas pyæmia or erysipelas (especially the former), indeed every kind of septic disease may be considered as directly due to the operation.

It is in this connection that I would again invite attention to a very suggestive clinical lecture by Dr. Stephen Smith, of New York, published in a recent number of the *Medical News*,* on the influence of *antiseptics* on the periods of amputation after crushing injuries. It is now, he says, a matter of every day's experience, that carbolic acid constantly applied to crushed tissues, as in irrigation, will arrest all tendency, both to putrefaction and to inflammation. He is accordingly able to prolong almost indefinitely the primary or ante-pyretic period, and thus abolishes the "intermediary" or inflammatory period, by the use of the agent in question. This agent, thus used, not for curative but for preventive purposes, and fulfilling that end by reason of its presumably germicidal effect, may legitimately be considered as coming within the scope of sanitary conditions. Time is thus given for the complete subsidence of the shock of injury, and for other changes which may exert a favorable influence on the result of an operation to be subsequently performed.

In view of the gratifying success which has attended amputations and excisions of the hip-joint for chronic disease, and in tertiary traumatic cases, in the rare occasions in which a patient with a penetrating wound of that joint survives the primary or intermediary periods, and of the almost certain fatality attending earlier interference under ordinary circumstances, one feels anxious to put Smith's method to the severe test of a hip-joint amputation for a recent crushing or gunshot injury.

There is a general agreement as to the depressing influence of cold in increasing the severity and danger of shock, and the suggestion of Dr. Noeggerath, of New York, to apply systematically artificial heat both during and after the operation, is undoubtedly wise. Spencer Wells and Knowsley Thornton have independently come to the conclusion that the Listerian spray has sometimes done harm by its chilling influence.

Until within a few years, *septic complications* have usually been the most fruitful source of mortality after operations in hospitals, and that is often the case even now. Thus, ac-

* *Medical News*, April 15th, 1882. Philadelphia: H. C. Lea's Son & Co.

According to the tables of Bryant (1859), pyæmia was the chief cause of death in all classes of amputations, except the secondary * traumatic, in which exhaustion was the most frequent determining cause. Thus, pyæmia was the cause of death in:

Pathological amputations to the extent of 43 per cent. of fatal cases, or 5.4 per cent. of all cases.

Amputations of expediency to the extent of 60 per cent. of fatal cases, or 18 per cent. of all cases.

Primary traumatic to the extent of 43 per cent. of fatal cases, or 16 per cent. of all cases.

Secondary traumatic to the extent of 25 per cent. of fatal cases, and exhaustion in 60 per cent. of all cases.

At a later date (1874) Erichsen gives the following table, representing the summary results of amputations in four metropolitan hospitals, in which the deaths from pyæmia and shock are recorded for various periods between 1861 and 1872:

HOSPITAL AND YEARS.	TOTAL.	DIED.	PYÆMIA.	SHOCK.	PERCENTAGE.
<i>Primary Amputation.</i>					
A. 1866-70.....	21.	13.	4.	6.	62.
B. 1861-72.....	140.	67.	24.	8.	46.4
C. 1869-70.....	18.	8.	2.	5.	44.3
D. 1867-71.....	8.	2.	0.	2.	37.5
Total primary.....	187.	90.	30.	21.	48.6
<i>Secondary.</i>					
A. 1866-70.....	20	16	9	2	80.
B. 1861-72.....	53	30	10	1	56.5
C. 1869-70.....	5	1	1	0	20.
D. 1867-71.....	6	3	2	0	50.
Total secondary.....	84	50	22	3	59.5
<i>For Disease.</i>					
A. 1866-70.....	89	31	15	0	34.9
B. 1861-72.....	215	56	16	0	26.
C. 1869-70.....	17	5	0	0	29.5
D. 1867-71.....	29	6	3	0	20.6
Total for disease.....	350	98	34	0	28.00
Total of all amputations.....	631	239	86	24	37.8

* The "Secondary" of Bryant included the "Tertiary" of recent classification

Mr. Erichsen's own personal experience in eighty cases of amputation (excluding all partial amputations of hand and foot) performed in University College Hospital from July 1, 1870, to December 1, 1873, gives a percentage of mortality of 26.2—the deaths from pyæmia and erysipelas being 47.6 per cent. of the fatal cases, and 12.5 per cent. of the total number of amputations. This was exclusive of the deaths from exhaustion, in regard to which there may be a doubt as to its dependence on hospital influences.

These results were reported in 1874 by this eminent surgeon as a fair specimen of the best results that had been obtained in the London hospitals at that date. Assuming that the percentage of septic complications may be taken as a measure of the sanitary condition of hospitals, the exhibit was far from satisfactory. And if this were the best that city hospitals could do, the argument of Sir James Simpson would be unanswerable. But Mr. Erichsen, though adopting the suggestive term "Hospitalism" as the title of his essay, was careful to disclaim the belief that this excessive mortality was a necessary incident of hospital surgery and to express the opinion that it was probably dependent on removable causes, and hence might be materially reduced, if these could be determined and their occurrence prevented. It is true that in discussing the causes of "runs of good and bad luck," he ascribes their occurrence, "in many cases," to the prevalence or absence of epidemic septic influence at any given period, but the comparative infrequency of such outbreaks in tolerably well regulated hospitals at the present day casts a shade of suspicion on the accuracy of this mode of interpreting the facts in the past, and makes it far more probable that when they do occur, they are due to defects of sanitation, which, when discovered, may be readily removed. That they are now ordinarily averted to a much greater extent than formerly, will clearly appear from facts stated by Mr. Savory in his address on surgery before the British Medical Association in August, 1879, just five years after the publication of Erichsen's *Lectures on Hospitalism*. He cited the following statistics of blood-poisoning after operation or injury in St. Bartholomew's for the three years of 1876, '77 and '78:

Cases of injury.....	2,862	Cases of operation.....	1,235
Deaths after injury.....	7.47 p. c.	Deaths after operation.....	5.82 p. c.
Cases of Pyæmia after injury.....	0.29 "	Pyæmia after operation.....	0.89 "
Cases of erysipelas after injury.....	0.76 "	Erysipelas after operation.....	3.07 "
Deaths from pyæmia after in-		Deaths from pyæmia after ope-	
jury.....	0.29 "	ration.....	0.80 "
Cases of blood-poisoning after		Cases of blood-poisoning after	
injury.....	1.05 "	operation.....	3.96 "
Deaths from blood-poisoning		Deaths from blood-poisoning	
after injury.....	0.42 "	after operation.....	1.44 "

If now, we inquire by what particular means these greatly improved results of hospital surgery were achieved, let us hear Mr. Savory's answer in his own language:

"Each one of the surgeons of St. Bartholomew's, perhaps, carries out certain details in some way different from the others; but on the chief objects in view, we are undoubtedly in accord. We aim at the most scrupulous cleanliness in the most comprehensive sense of the term. We strive to secure this by all possible means. *We use very freely antiseptics of various kinds.*" (This statement deserves notice, inasmuch as one of the objects of the address was, to depreciate the value of the special method of using antiseptics advocated by Prof. Lister.)

"And, with cleanliness, we attach, for the most part, the highest importance to rest. We are careful to disturb wounds during the process of repair as little as possible. Cleanliness, in its surgical sense, and rest, in its physiological sense, may be said to be the leading aims. But we are by no means satisfied with directing attention only to wounds. We are most jealous of the state of the atmosphere of our wards. We keep the air as pure as possible. We have no particular or patent system of ventilation. Ventilation is effected only by open windows and large chimneys. But we are proud of the habitual state of our wards, even when most closed, as during the night-time. We should not, for a moment, tolerate any unpleasant or suspicious odor. We are careful to avoid, as far as practicable, any tendency to over-crowding of wounds in the same ward, and each patient has from 1,100 to 1,400 cubic feet of space. Lastly, we attach the highest importance to the state of health and condition of the patient before operation; and never, where we have choice and opportunity, do we inflict an injury without previous inquiry in this direction very fully carried out."

A yet greater triumph of hospital sanitation was achieved in this city (Philadelphia), and is recorded in an interesting

volume on "Surgery in the Pennsylvania Hospital" by Drs. Thomas G. Morton and William Hunt, Surgeons to the Hospital. (J. B. Lippincott & Co., 1880.)

It is stated that from the spring of 1875 to the same period in 1879, a space of four years, there were performed 108 amputations upon 100 patients. Of this number, only seventeen died, and five of these deaths took place within the first thirty-six hours following the admission of the patient, and in each instance from recurring or continuous shock. Of the remaining twelve deaths, four were from tetanus, two from exhaustion, albuminuria, etc., three from secondary hæmorrhage, two from delirium tremens, and one from serous cerebral effusion.

It is added that during the past five years, from May, 1874, to 1879, *there has not been a single case of pyæmia*, the most carefully conducted *post-mortem* examinations by Dr. Longstreth having failed to demonstrate even an approach to this malady. This result is attributed to the very perfect system of forced ventilation by the fan, which, by day and by night, from one year's end to the other, is constantly in operation, to scrupulous cleanliness of the wards, to the free use of carbolic acid in the dressings, and to an admirable system of dressing wounds with flowing water delivered from Dr. Morton's "Hospital Dressing Carriage," which has enabled the surgeons to dispense with all basins and sponges, and thus to avert the contamination so likely to occur when they are used.*

I am indebted to the kindness of my friend, Dr. Wm. S. Forbes, and to Dr. Houston Mifflin for the statistics of amputations practised in this hospital from June 1, 1879, to April 15th, 1882, which show, out of twenty-eight amputations, four deaths from pyæmia, besides one from diffuse cellulitis, and two from prolonged shock. The fatal cases were cases of "railroad crush"—a fact which goes far to relieve the hospital, with so good a previous record, from the opprobrium of so large a percentage of deaths from septic complications. Certainly, with so small an absolute number

* See also the remarks by Dr. William Hunt on Hospitalism in the same volume, p. 2.

scattered over three years, there can be no question of epidemic influence. Possibly, the hospital authorities may have rested on the laurels previously won and have relaxed a little of that untiring vigilance which is the price of hospital salubrity. For, as was well said by John Simon, who combines, with the special knowledge of an expert in sanitary science, a large experience in hospital practice, "that which makes the healthiest house, makes likewise the healthiest hospital—the same fastidious and universal cleanliness, the same never-ceasing vigilance against the thousand forms in which dirt may disguise itself in air, and soil and water, in walls and floors and ceilings, in dress and bedding and furniture, in pots and pans and pails, in sinks and drains and dust-bins. It is but the same principle of management, but with immeasurably greater vigilance and skill, for the establishment which has to be kept in such exquisite perfection of cleanliness, is an establishment which never rests from fouling itself. Nor are there any products of its foulness—not even the least odorous of such products—which ought not to be regarded as poisons. Above all, this applies to the fouling of the air within hospital wards by exhalations from the persons of the sick, so that for hospital hygiene, ventilation requires pre-eminent regard." *

As illustrating the disastrous effects traceable to a previously altogether unsuspected source of mischief, Mr. Simon states that in one division of the Vienna Lying-in-Hospital an immense mortality from puerperal fever was believed by Semelweiss, the head of the department, to depend upon an infection of which "the real source was to be found in the hands of the medical men in attendance contaminated with cadaveric poison." The other division of the hospital (reserved for the practical instruction of midwives, whose training does not require them to be brought in contact with dead bodies) suffered only about a tenth part as much as the first, although inferior to it in size and airiness of its wards. By the use of sanitary precautions, Dr. Semelweiss reduced the mortality from $13\frac{2}{3}$ per cent. to $1\frac{1}{3}$.

* J. Simon, 6th Report of the Medical Officer of the Privy Council, London, 1863.

I am indebted to the courtesy of Dr. L. R. Knight for the statistics of amputations performed in the Episcopal Hospital of Philadelphia from 1875 to 1882. The total number of amputations was eighty, with seventeen deaths, of which only one was from pyæmia, a majority being from shock and exhaustion. But Dr. Knight states that there were during this time some other cases of septic complications in connection with head injuries.

The exhaustive investigation made in 1864 by Bristowe and Holmes into the sanitary condition of the hospitals of the United Kingdom and of those of Paris, under the directions of the medical officer of the Privy Council, led them to the conclusion that "whenever surgical diseases presenting open sores (especially operation cases and cases of accident) are received, hospital diseases, such as erysipelas, pyæmia and phagedæna, are likely to arise. The liability of these affections to originate and to spread is considerably influenced by concentration of 'traumatic' atmosphere, but their development and spread are both chiefly dependent on want of cleanliness, bad drainage, over-crowding, defective ventilation, and the like." They saw abundant reason to satisfy themselves that the health of hospitals is influenced in a far greater degree by conditions belonging to hospitals themselves, than by conditions of external atmosphere, of site, of soil, and the like, and that the healthiness of hospitals is less dependent on the form and size and distribution of wards than it is on ventilation, drainage, cleanliness and proportion of inmates to space. A hospital of defective construction may, by careful attention to these latter conditions, be rendered, even in a large town, comparatively healthy; and a hospital built on the most approved plan and occupying the choicest site, may be rendered, in the highest degree, unhealthy by their neglect.*

It is well-known that the value of the statistics of amputations in private practice collected by Sir James Simpson and published in his work on "Hospitalism" in 1872, has been sharply impugned by numerous opponents, notably Mr.

* The Hospitals of the United Kingdom, by Dr. Bristowe and Mr. T. Holmes. Appendix to Sixth Report of the Medical Officer of the Privy Council, 1863.

Holmes and Mr. Callender. Nevertheless the impression left on the public mind is exhibited in the tendency observed of late to substitute small for large hospitals, or to construct the latter on the pavilion plan, with the restriction to a single story, or to two at most. Burdett, in his work on "Cottage Hospitals," published in 1877, after stating that the best results obtained from hospital practice, as reported by Dr. Erichsen, gave a death rate for amputations of 25 per cent., adds that 326 amputations in 61 cottage hospitals gave a mortality only a little over 17 per cent. He further stated that of 241 cases of amputation, with 45 deaths, in which the cause of death was reported, there were five cases of septic disease (four pyæmia and one of septicæmia)—that is, only 11.1 per cent. of all the fatal cases. In no case of amputation for disease did pyæmia or septicæmia exist in the cottage hospitals, whereas in Dr. Erichsen's cases there was as large a percentage of deaths from pyæmia after pathological amputations as after primary amputations for injury.

It is curious, and not without significance, that Burdett, while earnestly advocating cottage hospitals for the sick and wounded, is of opinion that Dr. Mathews Duncan has conclusively refuted the objections of those who decry maternity hospitals, and say that they ought to be abandoned and small cottage hospitals substituted for them. He shows that the mortality of the Dublin Rotunda, one of the largest maternity hospitals, with a most complete set of statistics, will challenge comparison with that of any small hospital or that of any private practitioner whose statistics can be confidently relied upon.

I have, within the last few months, made an effort to collect statistics of amputations in private practice, and especially from the practice of physicians along the lines of railroads, presenting, therefore, an unusually large proportion of primary operations for railroad injuries. The number of cases is not nearly as large as I expected to obtain; but the large proportion of recent and severe injuries makes the record fairly comparable with the experience of city hospitals. The total number of amputations amounted to 686, with 100 deaths, or 14.57 per cent. They were distributed as follows:

Thigh Cases (including two cases of Hip-Joint).

	Number of Cases.	Deaths.	Percentage.
Primary for injury.....	74	19	25.67
Secondary for injury.....	29	6	20.68
Pathological.....	68	9	13.23
Total.....	171	34	19.88

Leg—including Disarticulations at the Knee.

	Cases.	Deaths.	Percentage.
Primary for injury.....	172	27	15.69
Secondary for injury.....	46	2	3.34
Pathological.....	55	9	16.36
Total.....	273	38	14.28

Arm and Shoulder.

	Cases.	Deaths.	Percentage.
Primary for injury.....	107	13	12.15 nearly.
Secondary for injury.....	22	6	27.27
Pathological.....	13	2	15.38
Total.....	142	21	14.78

Fore Arm.

	Cases.	Deaths.	Percentage.
Primary for injury.....	80	4	5.00
Secondary for injury.....	10	2	20.00
Pathological.....	10	1	10.00
Total.....	100	7	7.00

	Cases.	Deaths.	Percentage.
Total Primary.....	433	63	14.54
Total Secondary.....	107	16	14.95
Total Pathological.....	146	21	14.38
Total.....	686	100	14.57

The causes of death were returned in too few instances to furnish grounds for trustworthy generalizations. Among the small number reported there was a fair proportion of pyæmia and septicæmia.

Assuming these statistics to be a faithful exponent of the average results of amputation in private practice, I would observe that before they can be held to warrant deductions unfavorable to hospitals, it must be shown that in all other particulars likely to exert an influence on the death-rate, the two sets of cases were precisely parallel; and that the difference of results could thus be ascribed to nothing else than

to hospital influences. This, it is needless to say, it would be impossible to do. In one particular, quite aside from any influence of the hospital as such, there must almost always be an important difference. Hospitals which obtain their inmates from the poorer classes of our cities, even though they themselves be situated in the suburbs with extensive grounds and all other advantages of rural life, must always have a higher death-rate than is found in country hospitals and in private practice among the hardy residents of agricultural districts. It is noticeable that the difference is much less in respect to amputations for disease, where the original superiority of the country people has been, in a measure, lost under the depressing influence of wasting sickness.

Thus, while in the Massachusetts General Hospital the percentage of deaths from primary traumatic amputations was 35.46, that of pathological amputations was only half, or not quite half, namely, 17.34 per cent; whereas in the cases collected from private practice, mostly in the country, the mortality of pathological amputations was as great as that of the traumatic cases, and nearly if not quite as great as the same class of operations in well-conducted hospitals. This confirms a deduction made by Mr. Simon from Mr. Teale's figures, which went to show that while the death-rate of the city hospitals for traumatic amputations is higher than in country hospitals as 50 to 37½, in other amputations the *London death-rate is a shade better than the country death-rate*. "In cases of injury, the Londoner may be less able to resist shock; and the injuries among railways, in the docks, etc., are more likely to be severe than in an agricultural community. Hospital unhealthiness, if it existed, would have affected the amputations for disease."

Furthermore, the statistics collected by Bristowe and Holmes in 1863, show that in eight metropolitan hospitals out of a total of 2,874, there were only 50 from pyæmia, or 17 per 1,000; while in 33 rural hospitals, out of 1,086 deaths there were 37 from pyæmia, or 34 per 1,000, or exactly double the proportion found in the metropolitan hospitals.

In view of such facts as these it becomes sufficiently apparent that the higher general mortality of the best conducted

city hospitals than that of cottage hospitals in the country, is dependent upon other causes than concentration of traumatic atmosphere. Most of the cottage hospitals whence the favorable statistics of Burdett have been derived, are occupied by patients who get admission by letters of the subscribers, and who are generally affected with chronic and mild disorders, remaining long in the hospital, and excluding severer cases. Thus they are exempt from that "intensity of experience" which is the lot of city hospitals fulfilling appropriately their office of taking care of those who most need the benefaction, and constantly renewing the supply as the subjects of acute injuries are rapidly removed by death or by convalescence.

The facts cited in this connection by Bristowe and Holmes seem fully to justify their conclusion that if St. Bartholomew, just as it is, could be moved to the country with, however, its supply of patients from the city, the effect, if any, would be small. "But," they say, "if the removal were to change the supply of patients, whether as to the nature of the cases or as to the class of persons admitted; if instead of a large proportion of dangerous accidents and acute diseases, the practice of the hospital were to lie chiefly among chronic invalids and convalescents; or if instead of the worn out victims of want and debauchery, who are the principal subjects of injury and acute diseases in town, the healthier inhabitants of the country were to become the inmates of the hospital, then there can be but little doubt that the success of treatment would be considerably increased. If the hospitals were moved they would become receptacles of chronic cases only, and depots for acute cases and bad accidents would be constantly overcrowded."

The sanitary defects of any given hospital will generally be traceable to faults of location, faults of construction, or faults of administration. The two former classes of defects may be irremediable otherwise than by an abandonment of the faulty structure and the erection of another on a better site and after an improved plan. And while the sanitary principles which should govern the selection of a site and determine plans of construction have been carefully and ex-

haustively studied, less attention has been paid, either in theory or in practice, to the details of administration, which, in my judgment, exert a far greater influence on the results of surgical treatment. I mean to say the best constructed hospital, in the healthiest site, will furnish no guarantee of salubrity if ill administered; while incessant and scrupulous attention to cleanliness and ventilation, with a suitable distribution of the patients, will go far to wipe out the opprobrium of hospitalism in even the largest hospitals of populous cities, the death-rate under such circumstances being as low, if not less, than it would be among the same class of persons treated in private houses.

It would not be out of place to notice, in this connection, the leading principles of hospital construction and administration; but inasmuch as such a notice would extend this paper to an inconvenient length, and there is a pretty general agreement as to the sanitary requirements in both relations, I must content myself with a very brief statement of the most essential points.

That the system of isolated pavilions, of one or more stories, offers certain advantages in respect of facilities for natural ventilation and for preventing the diffusion of a traumatic atmosphere from one ward into others, will be generally admitted; and when circumstances permit, preference ought, I think, to be given to this system. But this is often precluded by obvious considerations for the central districts of populous cities where yet hospitals of considerable capacity are indispensable to meet the wants of the laboring and pauper classes. The experience of such hospitals as St. Bartholomew's, with its four stories of wards, and the Glasgow Royal Infirmary, with five, seems to show that with due precautions, one story need not share in the atmosphere of another. The intervening ceiling and floors should be impermeable, and not absorbent, and the ventilation should be from the outer air. The opinion, so far expressed, that it is dangerous to place one ward over another, is founded either upon purely theoretical considerations or upon results obtained from hospitals otherwise ill-constructed or badly administered.

The same may be said with reference to the limitation of the size of hospitals. There is no adequate proof that small hospitals, other things being equal, are more salubrious than the large. Thus no such difference is found to exist between the larger and smaller hospitals in London. Indeed, the largest hospital (St. Bartholomew's) in that city had a death-rate for the amputations of three years, 1860-'62 inclusive, of only 17 per cent.,* while Burdett only claims a death-rate of a little over 17 per cent. for the amputations in sixty-one cottage hospitals.

It often happens that a small hospital, so situated as to create a heavy pressure upon its resources, may for that reason exhibit a high mortality in spite of an excellent sanitary condition, the result being due to the greater gravity of the cases admitted. In like manner an improvement in the death-rate may follow enlargement of accommodations which permitted the admission of a larger proportion of slight cases. Bristowe and Holmes cite striking examples of both kinds.†

Septic complications are, indeed, likely to arise in a ward, whether of a small or a large hospital, in which a number of surgical cases, with open, suppurating wounds, are placed in proximity to each other; but by diluting these with non-surgical cases, and thus preventing over-crowding, it is quite possible to prevent the spread of such affections by adequate ventilation and scrupulous cleanliness, using this term in its most comprehensive surgical sense, as including not only cleanliness of person and clothing, but perfect purity of the atmosphere, to be maintained by proper drainage and sewerage, and such precautions as will tend to prevent the introduction and retention of morbid germs, and effect the destruction of those which may be unavoidably present. Thus all the walls and ceilings should be as little absorbent as possible. All unnecessary furniture should be excluded, and the bedding be frequently cleansed and disinfected. No sponges should be allowed in the wards—some such arrangement as Morton's ward carriage being substituted therefor. No person who has spent some time in the dead-house or in

* Bristowe and Holmes, *Loc. cit.*

† Bristowe and Holmes, *Loc. cit.*

the dissecting-room, should be permitted to come into a surgical ward, much less to assist in operations or in dressing open wounds, until he has been thoroughly washed and has entirely changed his clothing. There should be a complete isolation of patients with foetid ulcerations, especially those of a cancerous nature. Erichsen advises that not more than half the patients in any ward should have suppurating sores, nor more than one-third, if they be severe, and that all cases of septic disease be instantly isolated. He insists, moreover, that every surgical ward should be closed once a year for a month, during which time it should be thoroughly disinfected and whitewashed. And above all, and under all circumstances, overcrowding, for however short a time, must be avoided.*

Overcrowding he defines to be "the accumulation within one ward, or under one roof, of a greater number of patients than is compatible with such a degree of purity of air, as to render the septic poison incapable of development, or if generated, of propagation in it." It is not, therefore, a fixed standard of cubical space per head for all diseases, which determines the limits of safety in respect of overcrowding, but a standard which must vary very largely with the nature of the cases, open suppurating wounds requiring much more air space than unwounded cases. As just intimated, all cases of septic disease should be instantly isolated, and when the weather permits they should be allowed an indefinite amount of fresh air by open opposite windows, with as large an amount of air space as circumstances will permit.

Ventilation, and preferably, perhaps, natural ventilation, is, indeed, the essential desideratum in hospital construction and hospital management. As has been already stated, Mr. Savory ascribes the surgical success of St. Bartholomew's to this, among other sanitary influences, that ventilation is effected only by open windows and chimneys. Bristowe and Holmes, emphatically endorsed by the medical officer of the Privy Council, are equally decided in their preference of natural ventilation, asserting, indeed, that adequate ventilation has never been effected by artificial machinery, all attempts in

* *Hospitalism*, by J. Eric Erichsen, 1874.

this direction having proved costly failures. They ascribe the surgical unsucccess of the costly hospital of La Riboisiere, of Paris, to the failure to use the windows of its fine pavilions, in lieu of which natural ventilation very beautiful and ingenious systems of artificial ventilation are substituted. They believe that, with open fire-places, provided the cubic space is ample, the beds well apart from each other, and the windows constantly open, no accessories whatever are necessary, and they conclude that with a due supply of fresh air, almost every shape of hospital and of ward has been found to fulfill its purpose; and without it none of those which they visited, admirable as many of them were in some other respects, were found to be safe receptacles for the sick and wounded. Some examples of a low rate of surgical mortality in old hospitals constructed on the block system, when they were well-managed with reference to ventilation and other sanitary requirements, have been cited. I will again allude to the Pennsylvania Hospital of this city in connection with statistics reported by Dr. Wm. Hunt in 1874.* He shows that of the 90 deaths occurring among 1,387 surgical patients in that hospital for the year 1872-3, 63 were fatal in themselves, whether in or out of hospital, leaving a mortality of 27 to be accounted for, of whom four are put down to pyæmia. The others were made up of very severe cases, such as compound fractures, exhaustive suppurative troubles, necrosis, etc. He questions whether in 1,387 surgical cases, mostly very serious, in private practice, four cases of pyæmia would not occur. He is very certain of it, if the 1,387 had been treated in the places where they lived.

I may now venture to answer, with some degree of confidence, some of the questions raised in the beginning of this paper.

The largest proportion of amputations, those, namely, for injury, are subject to a source of danger which does not apply in an equal degree to ovariectomy cases. These are comparable with pathological amputations, and the death-rate of the latter in private practice and in well-administered hospitals will compare quite favorably with that of ovari-

* *Philadelphia Medical Times*, Nov. 24, 1874.

otomy under the most successful operators. And as to the primary traumatic amputations, with their liability to fatal shock, there is ground to believe that the mortality can be largely reduced by postponing the operation until thorough recovery from the shock of injury, while yet inflammation is averted by carbolizing the crushed tissues, and that this may be done in hospital with as much certainty and security as in private practice.

That the death-rate of amputations in hospitals deriving their inmates from the pauper population of large cities will ever be higher than in private practice or in country hospitals, is more than probable; but there is a much more satisfactory explanation than any assumed occult influence of hospitalism. Mr. Holmes has shown by an analysis of 83 deaths after amputation, with reference to the causes of death, that in a considerable proportion, namely, 14 out of 83, death was really inevitable, though not known to be so at the time of amputation, the true causes of death being revealed by autopsies. Furthermore, that of the remaining 69, in 33, or nearly one-half, death was due to the joint effects of the operation and other causes, these other causes having a main share in the result. Now it is safe to assert that these undetected complications which have so large an agency in determining the fatal issue of amputations, are far more common among the subjects of treatment in city hospitals than among the rural populations. Deducting these two classes of cases, and comparing the mortality after amputations in private practice and in hospitals, there is no satisfactory evidence that the latter, if well managed, may not give as good results as the former. But after securing all that can be accomplished by the most scrupulous cleanliness, and after we have thereby rendered the atmosphere of a hospital comparatively *aseptic*, we can never be sure that the exclusion of septic germs is absolute and complete. On the contrary, we may be quite sure that this is always impracticable. Wherever putrefaction can occur, there open wounds are liable to the risks of putrid absorption and septicæmia.

Dr. Burdon-Sanderson, in his recently published Lumleian Lectures on Inflammation before the Royal College of Physi-

cians, has shown, by positive experiments, that septic bacteria, or their germs, in a viable state, are not necessarily phlogogenic, and that "although neither the exudation products of a normal inflammation alone, nor septic organisms alone, are infective, the association of these two conditions is always so; in other words, that exudation fluids which are infective, owe that property to the chemical changes which septic ferments determine in them, and conversely, that septic organisms which are infective owe their infectiveness to the exudation soil in which they are grown." "Thus the presence of septic organisms (provided they have not been bred inside the body) is not necessarily attended with danger, but they become sources of great danger when they are brought into relation with devitalized organs, or with extravasated serous liquids of any kind, and particularly with inflammatory exudation."

In further elucidation of this subject, he refers to experiments which show that after an injection of a liquid charged with bacteria, into the peritoneal cavity, the lymphatics leading from the peritoneum swarm with these organisms, which also then abound in the blood. If the animal is killed, say ten days or a fortnight after the injection, yellowish or opaque deposits are found here and there in the internal organs, particularly in the lungs, liver, and kidneys, which have been conveyed by the blood stream to the places in which they are found. If instead of charging the circulation with harmless bacteria grown outside of the body, you produce an acute peritonitis, the effect is the same mechanically, but pathologically very different. In both cases the peritoneum contains liquid charged with septic organisms, which, in both cases, are carried by the lymphatics into the blood stream; but in one case they enter the circulation incapable of doing any harm, except such as may result from the plugging of capillary arterioles; in the other, they carry with them an infective virus by virtue of which, wherever they lodge, they become the starting points of infective abscesses."

It is worthy of note that this demonstrated acquisition of virulent properties by septic bacteria from the exudation soil in which they may be made to grow, is in beautiful accord

with the more recent observations of Pasteur, Sternberg, and H. C. Wood of this city, in respect of other noxious bacterial organisms and micrococci, so that the influence of the soil in which these organisms grow, has now become a well-established principle of wide application.

It is to be hoped that the lucid exposition by Burdon-Sanderson of principles clearly and necessarily deducible from carefully-conducted experiments will finally settle all disputes as to the rôle of septic micro-organisms in the production of septicæmia and pyæmia. On the one hand, they refute the extravagant doctrine distinctly enunciated by Prof. Hueter, that inflammation is impossible without the agency of morbid germs, and that consequently the most severe injuries can be inflicted without producing inflammation if germs be excluded; and on the other, they indicate the absurd unreasonableness of those who obstinately maintain, "in the face of all the experimental investigations relating to the subject during the last few years, that these organisms are without pathological significance." * * * "If they are present in every intensely infective inflammation, we may be quite sure that they stand in important relation to the morbid process." *

Now, I cannot agree with the assertion of Mr. Savory, that for the prevention or removal of either or both of the two factors in the production of the infective virus, "free ablution with clean water is the simplest, safest and best of antiseptics." Simple, of course, it always is. Safe, it may often be, when the situation of the wound and its form admit of perfect irrigation without retention of fluid in any of its recesses; but under other circumstances, it cannot be safe, and therefore cannot be the best of antiseptics, or even a moderately good one. For Burdon-Sanderson has shown that water, whether contaminated with septic organisms or not, may be introduced into the peritoneum in limited quantity without effect. But if water, which has just been boiled and cooled (thus perfectly sterilized) is injected with antiseptic precautions in larger quantity—that is in quantity so

* *Lumleian Lectures on Inflammation*, by J. Burdon-Sanderson, M. D., LL. D., F. R. S., *London Lancet*, April 1st, 8th and 22d, 1882.

large that it cannot be rapidly absorbed—the result is entirely different. The water accumulates in the serous cavity, becomes charged by diffusion, first, with the salts, subsequently in increasing proportion with the proteids of the blood, and thus becomes a most favorable soil for the development of septic organisms which, in their turn, act infectively on the blood-vessels and living tissues with which they come in contact. And thus, even Mr. Savory's "clean water," if allowed to settle in any of the recesses of a wound, unless it be promptly absorbed, will become a source of positive danger by becoming charged with the exosmosed salts and albumenoids of the blood, and thereby creating a good soil for the development of infective organisms. When, then, the form and position of the wound are such as not to admit of effectual drainage, an additional protection may be derived from the use of special antiseptics, applied in conformity with the principle now generally associated with the name of Prof. Lister—that is the destruction of all germs which may be in contact with the injured tissues and the subsequent exclusion of all others. The precise details of Lister's dressings are not necessary for the establishment of this principle. Prof. Esmarch has recently stated that, by the use of pads soaked in absolute alcohol, fixed to the wound by an iodoform bandage, with some less important accessories, he had obtained the most satisfactory results. Out of 398 major amputations, there were only six deaths, 1.5 per cent., and none of them from septic complications. Of the cures, 85 per cent. healed by the first intention with one dressing. In the other 15 per cent., the dressing was renewed. Of fifty-one major amputations, only two died—one from shock and hæmorrhage, and one from delirium tremens.*

Mr. Wm. McCormac reported, in December, 1879, that of forty-five operations in hospital for the division of various bones, in order to remove deformity—among the most dangerous kinds of operations, especially when, as in thirty of the number, the knee-joint was engaged in the operation—every one of this considerable series recovered in the speed-

* *British Medical Journal*, Oct. 1, 1881.

iest, easiest and safest manner possible, under antiseptic precautions, and in every one of the thirty in which the knee-joint was opened, a freely, moveable articulation resulted. On the other hand, of fifty-four cases, during the previous six years not treated antiseptically, and from which all cases involving injury to the joints were excluded, twelve died, of which four were from pyæmia and four from erysipelas. There were also other cases of erysipelas which recovered after long illness. Volkman's experience has been precisely similar. *

Dr. J. Ewing Mears states that erysipelas and sloughing wounds have been entirely banished from St. Mary's Hospital in this city by rigid antiseptic methods, the hospital being situated in the midst of railroads and factories, and receiving every year a large number of severe injuries.

It has been repeatedly and offensively charged against Mr. Lister that his statistics are not published. The charge is not wholly true. Mr. Lister, in defending himself against this charge, after stating that he had had only one case of pyæmia in five years in a hospital in Edinburg, where he had an average of sixty patients under his care, gave the following statistics:

Seventy-two cases of injuries, with four deaths, or 5.5 per cent., as against 7.47 per cent., representing the boasted success of St. Bartholomew's, as reported in Mr. Savory's address. Then, of 845 operations, there were thirty seven deaths, or 4.39 per cent. Subtracting 120 minor operations, of which not one died, 725 major operations gave thirty-seven deaths, or 5.10 per cent., as against 5.82 per cent. at St. Bartholomew's. He added that he might have so manipulated his statistics as to include some of the fatal cases among the minor operations, as they were minor in respect to the character of the operation, such as introducing two or three horse-hairs in a spina bifida, or in a hydrocephalus, etc., which would have reduced the percentage of deaths after major operations. He further stated that he had shown over and over again that a blood-clot, no matter how large, exposed in an open wound, may, under strict antiseptic treatment, remain not only free from putrefaction, but may re-

* *British Medical Journal*, Dec. 6th, 1879.

main indefinitely without suppuration; so that when, in the course of time, its upper surface is peeled away, one finds a scar without a single drop of pus having been formed. This, he justly contends, is a new principle in the history of surgery. He has also shown that a disinfected mass of dead tissue may be absorbed in a way never before supposed possible, as, for example, the cat gut ligature. *

More recently, Dr. Hamilton, of Edinburgh, has shown that sponge, or any porous organic substance, rendered thoroughly antiseptic, may be safely incorporated with granulation tissue, which grows into its interstices.

Mr. Watson Cheyne, Surgical Registrar, King's College Hospital, has selected, as crucial tests of the antiseptic method, all the cases in Mr. Lister's hospital practice between September, 1871, and November, 1879, in which healthy joints have been opened by incision, or through accident, and kept open for some days. In making a statistical report of these cases in 1879, Mr. Cheyne announced, on behalf of the author of the antiseptic system, that the spray was the least important of the various antiseptic means, and that which could be most easily dispensed with, inasmuch as there are, undoubtedly, fewer organisms floating about in the air than are present on any instrument which has got dust or water on it. For many years Mr. Lister carried out the treatment without the spray. His readiness to abandon it need not, therefore, have created such surprise as was manifested when he replied to Mr. Keith's condemnation of this element of the antiseptic apparatus at the late International Medical Congress of London.

Mr Cheyne describes a particular case in which the knee-joint was opened in order to remove an exostosis growing from the external condyle, as representing the "typical aseptic course"—there being a slight febrile reaction on the second day, as indicated by the temperature, about 100° F., but with no impairment of appetite, and no other sign of fever being present. There was no pain, no inflammation, no suppuration, but only a slight serous discharge which rapidly dimin-

* *British Medical Journal*, Dec. 6th, 1879.

ished in amount, and finally there was no impairment of the mobility of the joint.

Where the joint has been opened by accident and dirt or dust-laden air have entered the joint before the surgeon sees the case, the sanitary "problem is not only to prevent the further entrance of causes of putrefaction, but also to destroy the vitality of those which have already gained admission, by injections into the wound and joint of a strong antiseptic solution which must penetrate into all the recesses of the wound. Usually, if the case is seen early after the accident, a solution of carbolic acid of one to twenty will suffice, but if several hours have elapsed, a solution of the same agent in rectified spirit, one in five, will be necessary."

One of Mr. Cheyne's tables gives the details of twenty cases of operations on joints, most of which were very bad cases, and all were cured of the affection for which they were treated, except one, a case of ununited fracture of the neck of the femur of eighteen months standing, and even that was greatly improved.

Two of the cases were for the removal of loose cartilages from the knee-joint.

In one remarkable case of osteitis of the tibia, in scraping out a soft granulation material from the interior of the shaft, the gouge accidentally passed into the ankle joint, which was healthy. Chloride of zinc was applied and a drainage tube inserted. No constitutional or local disturbance followed the operation, and the cure was complete in three months without pain and with a freely moveable ankle-joint.

The second table contained 12 cases of various degrees of injury to the bones, with opening of joints. All were cured but one, which subsequently underwent operation.*

Mr. Lister asserts that he has published numerous cases to show that he has opened large abscesses connected with disease of the vertebræ, and then, by the careful use of strict antiseptic treatment, he has not had another drop of pus.

**British Medical Journal*, Nov. 29, 1881.

Statistical Report of Some of the Results of the Antiseptic Method of Treatment in Mr. Lister's own hands. By W. Watson Cheyne, F.R.C.S., Surgical Registrar King's College Hospital

Dr. Stephen Smith, of New York, bears similar testimony in respect to these abscesses, which, under almost any other mode of treatment, have so long been the opprobria of operative interference. Sir James Paget said, two years ago, that until recently he had never seen a patient recover who had a lumbar abscess opened by free incision. Every one died. "But now," he adds, "I have seen several opened with absolute impunity under antiseptic treatment." In respect of amputations and other general operations, he thinks the lowest rate of mortality yet obtained may be reached by complete care, simple dressing, perfect sanitation of hospitals and private houses (there being no decided difference between the results of his private practice and that in his wards at St. Bartholomew's, except what might be fairly assigned to the difference in the character and positions of the patients), good nursing, and the keen and constant attention of the surgeon. But there remain certain groups of cases, in which he considers the complete antiseptic treatment to be absolutely essential to success. He thinks that, without any comparison, Prof. Lister has contributed far more than any one else to the present great improvement in the mortality after operations. He only doubts whether he has done more good by antiseptic treatment, than by provoking others to do their best in other ways."

Let us, then, conclude that Listerism, in connection with amputations, if not always and everywhere necessary—if perfect sanitation, good nursing, and the keen and constant attention of the surgeon be provided—is yet the "safest of methods as obviating occasional unavoidable defects of hygienic management, whether in hospitals or private practice.

I have collected the records of 88 cases of ovariectomy in American hospitals, giving 18 deaths—a percentage of 20.45; and 311 cases in private practice, with 95 deaths, or the large percentage of 30.54. The smallness of the total number in each class, especially of the hospital cases, and the extraordinary diversities of the conditions, as shown by a detailed analysis, go far to divest this result of any special significance. And yet I am led to believe that, with such a state of hospital sanitation as should be enforced at all times, and with

the isolation of this class of patients, there are certain advantages on the side of the hospital, as compared with the average conditions in private houses.

With reference to this point, the statements of Dr. Wm. Goodell, of this city, in grouping his cases, are very suggestive. Up to March 6th of the current year, this eminent gynecologist had operated in 67 cases of completed ovariectomy, and in one case in which, owing to adhesions, no attempt was made to remove the cyst. In this case, a drainage-tube was put in, and the patient recovered. Of 67 cases, 25 were operated on in the Hospital of the University of Pennsylvania—a general hospital—with 6 deaths. Eighteen were performed at the homes of the patients, but too far away for him to attend to them afterwards; of these, 7 died, or 38.80 per cent. Thirteen were operated on at home and had his subsequent care; and of these, 4 died, or 30.76 per cent. Eleven were operated on at his private hospital, with one death. This single fatal case in his private hospital was one of malignant disease of the ovaries, with universal adhesions, and was almost necessarily fatal. This private hospital is so near that he is able to see his patients very frequently, until the period of danger is past. He states in a letter to Dr. Bigelow, of Boston, that in two cases lives were saved by reason of his proximity to the hospital.

Dr. Homans, of Boston, has operated 47 times, at Carney Hospital, on Dorchester Heights, overlooking the city, the harbor and the bay, with only 4 deaths; of which, one was from acute mania, on the eighth day. A careful autopsy showed everything healthy and going on well in the peritoneum. There was hereditary insanity in the family. Excluding this case altogether, there were 3 deaths to 46 cases performed in hospital, or the small percentage of 6.52. Including it as a fatal case, the percentage would be 8.50.

His cases in private practice, performed with antiseptic precautions, which alone could be compared with the hospital cases, all of which were antiseptically treated, were 21 in number, with 2 deaths—a percentage of 9.52; a slight excess on the hospital mortality. These sixty-eight cases reported in the *Boston Medical Journal* of January 23, 1879,

January 20, 1881, and January 26, 1882, include all his ovariectomy cases except his first five, which were performed without antiseptics, and all were fatal.

Mr. Spencer Wells has also shown, that in his large experience there has not been any considerable difference in the results of his hospital and private practice. In 1874 and 1877, he had only 7 deaths in 71 cases of hospital practice—rather less than 10 per cent.; a better result than in his tenth and last series of 100 cases, exclusively in private practice.

It appears, therefore, that ovariectomy cases, provided they are separated from other surgical cases, do rather better in well-regulated hospitals than in private practice.

It has just been stated that Dr. Homans, of Boston, lost five cases in succession, the same having been treated without antiseptics, and that after adopting antiseptic precautions he has operated sixty-eight times, with six deaths—a percentage of 8.82, or excluding the case of acute mania, only 7.46 per cent.

The experience of Spencer Wells is also decidedly in favor of the antiseptic treatment. He states that long before Mr. Lister had tried any of his methods, he had himself insisted upon all possible care in protecting patients before, during, and after the operation, from all the known causes of excessive mortality, and had taken unusual precautions against any risk of any contagious or infectious disease being communicated to a patient, and against the entrance from without or the development from within, of anything which could set up traumatic fever or blood-poisoning. Obstetrical cases, cancers, offensive discharges were excluded from the same building, etc. "But in no series," he adds, "had I succeeded in reducing the mortality below 17 per cent. Then in the last series of 100 cases, all done antiseptically, the mortality fell to 11. Indeed, of 113 cases, since adopting more complete antiseptic precautions, there were only 12 deaths, or 10.6 per cent."*

He is still doubtful about the spray. In prolonged opera-

* Spencer Wells. Two hundred additional cases of ovariectomy, making 1,000 in all. *Med. Chirurg. Trans.*, LXIV., 1881.

tions the chilling effect upon patients may be injurious. He had never seen carbolic poisoning. He finds a great gain from the antiseptic method is that drainage of the peritoneal cavity is now scarcely ever necessary. He has not drained a single case in which antiseptic precautions had been taken. Under proper antiseptic precautions, no putrefaction takes place and absorption is harmless.

In like manner, Mr. Knowsley Thornton, surgeon to the Samaritan Free Hospital, which had been the theatre of many of Spencer Wells' triumphs, avows his adhesion to pure Listerism, to the exclusion of all so-called modified Listerism. He is convinced that the bad results sometimes ascribed to Listerism, should more properly be ascribed to imperfect knowledge of his teaching, and consequent imperfect application of his method. It is, he avers, by rigid adherence to the teachings of Lister that he has succeeded in lowering his rate of mortality in ovariectomy from 23.94 per cent. to 4 per cent.

In his first set of cases, which were non-antiseptic and extra-peritoneal, the mortality

was.....	23.94 per cent.
Second set, non-antiseptic and intra-peritoneal	19.35 “
150 antiseptic cases, all intra-peritoneal.....	10. “
First 75 of these antiseptic cases.....	16. “
Second 75 “ “ “	4. “

An interesting table added by Mr. Thornton, throws much light upon the various conditions which influence the results of this operation. Thus, of the 150 complete ovariectomies treated antiseptically,

50, with no adhesions, all recovered.

30, with slight adhesions, all recovered.

70, with extensive adhesions, gave all the deaths, 15 in number.

15 in private houses, all recovered.

6 in nursing houses, all recovered.

(Note, however, that a large majority of the 21 cases constituting these two last groups were free from extensive adhesions, only four or five being noted as having such adhesions.)

50 had been tapped and 7 died.....	14.	per cent.
100 had never been tapped and 8 died	8.	"
110 had 1 ovary removed with 10 deaths.....	8.54	"
33 had both ovaries removed with 5 deaths,	15.15	"
12 cases of drainage with 3 deaths.....	25.	"
6 cases completely drained with 2 deaths,	33 33	"
6 cases partially drained with 1 death.....	16.66	"

Among the fifteen deaths, three were from undoubted septicæmia, but Mr. Thornton is convinced that the septicæmia was due to previous non-antiseptic tapping.

It is noticeable that he ascribes the occurrence of acute pleurisy, in too fatal cases, to chilling from the spray in very cold weather, thus realizing an apprehension entertained by Spencer Wells.

Mr. Thornton's experience leads him to these conclusions :

"1. In the simple cases the patients recover under Lister's method with a certainty previously unknown.

2. There is less fever, and convalescence is more rapid than under the old method.

3. The success obtained in the more complicated cases is in proportion to the exactness with which the antiseptic method can be applied to the individual cases.

4. The accidents and complications occasionally following operations, such as hæmorrhage, for example, are more easily overcome in cases which are strictly aseptic.

5. There are difficulties, and even dangers, in the application of the method, and the more experience the individual has in it the more readily he foresees and avoids them, and the more complete becomes his success in applying it."*

On the other hand, Dr. Granville Bantock, another surgeon to the Samaritan Hospital, in a paper on "Hyperpyrexia After Listerism," refers to the danger of carbolic poisoning, of which children are particularly susceptible, and states that he has gradually diluted his spray and solutions so as to reduce the whole question to one of cleanliness, which he thinks is, after all, the secret and merit of Listerism.

In his non-Listerian cases, 36 in number, there were 9 deaths.

" pure	"	"	36	"	"	"	8	"
" modified	"	"	90	"	"	"	8	"

* *Med. Chirurg. Transactions*, LXIV.

And not one from septicæmia, whereas among his pure Listerian cases there was one death from septicæmia and one from carbolic nephritis.

All the world has been informed with every kind and degree of sensational statement that Mr. Keith electrified the surgical section of the late International Congress by informing his hearers, that though he had at one time a series of eighty recoveries under the spray, he had reluctantly given it up, believing that, on the whole, it did more harm than good. He had had two deaths in hospital patients, occasioned, he believed, by carbolic acid poisoning. Accordingly, he had not used the spray in his last twenty-seven cases, all of which had recovered readily. It will be observed, however, that this applies only to the spray, in regard to which Mr. Watson Cheyne, speaking for Prof. Lister, two years before, had already expressed doubts.*

Mr. Lawson Tait, giving his "Account of 110 consecutive cases of abdominal section performed since November 1st, 1880," states that they were all performed without antiseptics, and with a mortality of only 9, or a percentage of 8.18; and that in the operations for strictly ovarian cysts (51 cases) there were but two deaths, or only 3.92 per cent. Regarding this as an immense advance on anything hitherto obtained, he takes to himself "some credit for having burst one of the largest, most blown and most attractive bubbles ever displayed to a surgical audience."†

On a previous occasion this gentleman had expressed the opinion that the progressive lessening of the death-rate in ovariectomy indicates nothing more than mere increase of general skill. In his first fifty cases he had nineteen deaths and in his second fifty only three. He attributed the great success of his own practice and that of Mr. Keith, to the sys-

* Mr. Keith had previously, in an elaborate paper "On Ovariectomy Before and After Antiseptics" (*British Medical Journal*, October 19, 1878), expressed the opinion that by antiseptics we had made the following gains:

- (1.) It had lessened mortality.
- (2.) Earlier operations may be safely recommended.
- (3.) Drainage might in a measure be superseded.
- (4.) Convalescence was rendered easier.
- (5.) It had brought great comfort and relief to the operator.

† *Med. Times and Gazette*, November 5th and 26th, 1881.

tematic adoption of the intra-peritoneal method of dealing with the pedicle, and asserted that Mr. Spencer Wells resorted to this method nearly concurrently with his use of Listerian measures

Dr. Walter F. Atlee, of this city, who has operated with success in St. Joseph's Hospital and in private practice, never has used Listerism. He is careful not to allow anything to flow from the tumor into the abdominal cavity, and does not permit any fingering or sponging of that cavity.

His father, Dr. John L. Atlee, of Lancaster, who had a large experience and most excellent success, has only practised complete Listerism in a single case which was successful; but for many years he has used weak solutions of carbolic acid in keeping the hands, instruments and sponges clean.

Dr. H. R. Storer, in laying down his "Golden Rules" for ovariectomy, published in the *Boston Gynecological Journal* for December, 1869, does not include Listerism, but attaches importance to several weeks of prophylaxis, and, after the operation, to "a free diet, an appeal to skin and kidneys, patience and careful watching;" which he says will be sure to win, provided the surgeon does not vaccinate the woman with erysipelas from another patient, or with septicæmia by tying little sloughs into the peritoneal cavity, or allowing clots to remain and putrify therein.

Such facts cannot be regarded as without significance. They show that the highest success has been reached without the use of the Listerian dressings, but they do not convince the majority of skilled ovariectomists that it is safe to dispense with the additional security which the Listerian method confers. It is the part of wisdom to use every possible precaution against the development of septic conditions. That the Listerian precautions do avail to this end, the experience of Spencer Wells, Dr. Goodell and Dr. Homans abundantly proves. Operating under identical conditions in all other respects, they found a notable difference in the results of their antiseptic and non-antiseptic cases. In view of such experiences on the part of such men, we cannot be misled by Mr. Tait's dogmatic declaration that the terms "septicæmia"

and "septic peritonitis," which appeared in the mortality columns as the explanation of the deaths after ovariectomy, are simply nonsense and have led surgeons astray altogether.

POSTSCRIPTUM.

In the discussion which followed the reading of the foregoing paper, the writer was astonished to hear one or two eminent surgeons utter the senseless cry that "Listerism is dead." Some excuse might be found for the impulse which found expression in such a phrase, when Mr. Keith startled the Surgical Section of the late International Medical Congress of London by the wholly unexpected recantation of his faith in the spray, and Mr. Lister seemed for the moment to be about to abandon it. But that such a verdict should be deliberately pronounced ten months afterwards, in the face of the fact that the practice is upheld by such men as Paget, Spencer Wells, Knowsley Thornton, and many others in England, and by numerous surgeons of equal eminence in Germany, France, and America, the averment is simply preposterous. Those who make it probably intend to say, that *in their opinion* Listerism ought to die. As a matter of opinion this is intelligible, and will doubtless be received with as much consideration as may properly be due to the opportunities which the parties concerned may have had for making a fair comparison of Listerism with other methods. It deserves notice, however, that every person who denounced Listerism in the discussion in Philadelphia, took credit to himself for never having tried it.

Since the date of that discussion, the testimony from distinguished sources in favor of the antiseptic method has been largely augmented. I note particularly the statement made by the editor of the *British Medical Journal* (number for May 20, 1882) as to the "comparative observations made under similar conditions with and without spray" proposed by Mr. Spencer Wells and carried out in the Samaritan Hospital under singularly favorable conditions. The editor says: "We have been informed that the committee has expressed a strong opinion against the performance of ovariectomy for the future without full antiseptic precautions;"

and he justly concludes that "if in the same institution, at the same time, by operators of equal experience, the same operation with antiseptics is followed by a mortality of about 7 per cent., and without antiseptics by one of about 30 per cent., the fact deserves very serious consideration."

I may also refer to the convincing facts stated by Prof. William Stokes in his admirable Address in Surgery at the Semi-Centennial Meeting of the British Medical Association at Worcester, England, in August of this year. After citing numerous more or less conclusive observations of his own, Mr. Stokes adds: "Similar testimony to what I and my colleagues can state has been given by many foreign surgeons of eminence, among whom I may mention Von Nussbaum, Bardeleben, Esmarch, Thiersch, Von Langenbeck, Volkmann, Saxtorpf, Champonnière, and many others."

And yet, forsooth, "Listerism is dead"!!

ART. II.—**Idiocy and its Treatment.** By CHARLES H. S. DAVIS
M. D., Meriden, Conn.

The term idiot is applied to that class of persons whose intellectual development was arrested owing to mal-nutrition or disease of the nervous centres occurring before birth or before the evolution of the mental faculties in childhood, and is usually associated with some cranial malformation.

Idiocy may also be described as a condition in which the intellectual faculties are never manifested, or have never been developed sufficiently to enable the idiot to acquire such an amount of knowledge as persons of his own age and placed in similar circumstances with himself, are capable of receiving.

This weakness of the intellect and arrest of the psychical development usually depends upon a cerebral anomaly, a want of development, a pathological change in the brain or its membranes; yet there are many cases of idiocy where the weakness of perception does not depend upon organic changes, but originally upon a simple functional anomaly of the brain, induced by epilepsy, defective bodily nutrition, premature ossification of the sutures of the skull and a con-

sequent prevention of the growth which normally takes place actively during the first years of life.

Idiocy has been classified by many writers, but that of Seguin is the most simple: "The chronic affection of a whole or a part of the central nervous masses, which is characterized as *profound idiocy*. A partial or total affection of the nervous apparatus which ramifies through the tissues and presides over the life of relation, the result of which is *superficial idiocy*." He also describes a class of cases under the head of "Backward Children," in whom there seems to be a mere functional torpidity of the nervous system.

Dr. Down, in a paper on "The Obstetrical Aspects of Idiocy," * observes, that, in twenty per cent. of the cases of idiocy collected by him, there was a history of marked disturbance of physical health of the mother during pregnancy; in four per cent., a history of serious falls, followed by alarming uterine hæmorrhage; in six per cent., prolonged ill health; in ten per cent., persistent sickness, which had occasioned anxiety. He regards vomiting during gestation as an important producer of idiocy. Again, in as many as thirty-two per cent. of the cases, there was, as regards the mother, a history of fright, intense anxiety, or great emotional excitement.

Dr. Down † has made inquiries into the causes of idiocy in two thousand cases, and found that in forty-five per cent. there were well marked neuroses in the families of one or both parents.

A very interesting table of the effects of consanguineous unions was made by Dr. Bemiss, of Louisville, Ky. From his table of aggregates, the following extract is made, the reader observing that Class A includes instances of marriage or incestuous intercourse between brother and sister, or parent and child; Class B, instances of marriage or incestuous intercourse between uncle and niece, or aunt and nephew; Class C, marriage between blood relations, who are themselves descendants of blood relations; Class D, marriage between double first cousins; Class E, marriage be-

* *Transactions of the Obstetrical Society of London*, Vol. XVIII.

† *British Medical Journal*, Oct. II, 1873.

tween first cousins; Class F, marriage between second cousins; Class G, marriage between third cousins; Class H, marriage irregularly reported, all first cousins.

CLASSES.	No. observations in each class.	Unions sterile in each case.	Average number of births to each marriage.	PER CENT. CHILDREN.								
				Defective.	Deaf and Dumb.	Blind.	Idiotic.	Insane.	Epileptic.	Scrofulous.	Deformed.	Died young.
A.....	10	...	3.1	93.5	...	...	61.2	...	3.2	16.1	35.4	.....
B.....	12	3	4.41	75.4	1.9	5.6	5.6	1.9	1.9	20.7	26.4	43.3
C.....	56	4	4.17	53.8	4.2	5.1	12.8	1.2	1.7	18.8	3.8	26.9
D.....	27	...	5.7	27.2	1.2	1.2	2.5	3.8	1.2	6.3	1.2	35
E.....	580	40	4.8	24.9	4.2	2.2	8.3	...	1.6	6.2	1.9	22.5
F.....	112	5	4.58	13	1.7	...	3.3	...	1.1	2.9	1.7	16.5
G.....	12	...	4.91	27	5	...	1.7	1.7	3.4	16.9	.....	13.5
H.....	24	1	5	17.5	2.5	...	2.5	1.6	...	12.5	.....	10
Total.....	833	53	4.46	28.7	3.6	21	7.	....	1.5	7.6	2.4	22.4

It is to be noted that the number of defective births corresponds with the degree of consanguinity, except in the case of class G, where the number of observations was obviously too small to establish a rule.

Dr. Bemiss was satisfied that his researches gave him authority to assure that over ten per cent. of the deaf and dumb and over five per cent. of the blind, and nearly fifteen per cent. of the idiotic in State institutions for subjects of these defects, are the offspring of kindred parents, as of parents themselves the descendants of blood intermarriage.

A large proportion of idiots come of stock run down and exhausted by long perpetuation of vitiated constitutions, or long continuance of degrading and vicious habits.

Idiots and imbeciles are increasing in numbers at a rate greater than that of the general population. We also find that the present generation is more susceptible to stimulants and narcotic drugs, and that there is a great increase of the nervous diseases know as inebriety, hay-fever, neuralgia, nervous dyspepsia, and nervous exhaustion or neurasthenia.

Idiocy has always been, until within a few years, classified with insanity, but the two have no similarity, except in the fact that each represents an abnormal condition of the brain.

Esquirol, who classified idiocy with insanity, wrote that "the condition of a man in a state of dementia may change;

that of an idiot is ever the same." It was then thought impossible that an idiot's intellectual faculties could be improved. But the education of this unfortunate class has, in modern times, so far modified its correctness, that it is no longer right to speak of the faculties of the idiot being doomed to remain stationary.

Dr. Seguin says that not one in a thousand has been entirely refractory to treatment; not one in a hundred who has not been made happy and healthy; more than thirty per cent. have been taught to conform to social and moral law, and rendered capable of order, of good feeling, and of working like the third of a man; more than forty per cent. have been capable of the ordinary transactions of life under friendly control, of understanding moral and social abstractions, of working like two-thirds of a man; and twenty-five per cent. come nearer and nearer to the standard of manhood, till some of them will defy the scrutiny of good judges when compared with ordinary young women and men.

Goltz found, in his recent investigations, that when he removed a great portion of the hemisphere on one side, the animal did not become idiotic or demented; but if he removed portions from either hemisphere, the animal showed a diminution of mental power, with loss of tactile sensibility and awkwardness in its movements. Dr. Ireland,* therefore, supposes that in idiots who improve under instruction, where the whole cerebrum is diseased, it in great part recovers its tone by being brought into healthy exercise, and that where a part still remains sound, it is thrown into more vigorous exercise than the rest, attracts a greater supply of blood, and gains a more vigorous nutrition than the surrounding parts.

Where the deficiency is congenital, the prognosis is often better than where it is traceable to diseases occurring in childhood; great improvement in the intelligence often follow improvement in the general health, as in the successful treatment of strumous and anæmic conditions.

Without training and education, idiots are an unproductive class; with it, their industrial capacity is greatly increased. The most zealous efforts of earnest teachers in the

* *Edinburgh Rev.*, June, 1882.

ordinary schools are ineffectual to meet the requirements of idiots, and it is only by teachers specially skilled and qualified for the duty that these unfortunates can be benefited, and under their care, in many cases, astonishing moral, intellectual and physical improvement can be accomplished.

The greatest difficulty of the teacher is to properly classify his pupils and to form an estimate of their mental power and guess at what stage to begin, what faculties can be most readily called into cultivation, and what most require training and exercise. The difficulty of individualization is the great objection to asylums. We know that the blind and deaf are rendered less educable by associating with others having the like infirmity. So with feeble-minded children, where only a few are associated together they can receive better care; and kind treatment, good diet and attention will improve the most hopeless cases. Their teaching requires judgment, study and experience, and must be modified to suit each particular case.

ART. III.—**Phthisis, and the Means to Prevent it. Light and Air.*** By M. A. RUST, M. D., Richmond, Va. (Read before the Richmond Medical and Surgical Society, August 7th, 1882.)

"And God said, Let there be light: and there was light."

Let this vigorous and dramatic verse be suspended in every dwelling instead of the customary embroidered platitudes; it may, perhaps, by association of ideas, contribute to the promotion of health, in general, and the prevention of phthisis in particular.

Light and Air, second only in dignity to heredity and contagion, which we discussed at our last meeting, will be our subject this evening.

Long before science had demonstrated that all life on this planet was dependent on the rays of the sun, there existed ancient nations in which man was far enough advanced in brain-evolution to be capable of the nobler emotions. Absorbed in admiration of the sun's works and benefits, he cast

* This is the second of a series of papers read by Dr. Rust before the Society—the former paper being on *Heredity and Contagion of Phthisis*.

his own image into the fiery disk and worshipped it as his God.

We all know that a want of sunlight and air favor the development of phthisis; and we find this fact recorded in every hand-book of pathology in the chapter on *consumption* under the heading *etiology or prophylaxis*.

Statistical material also, is not wanting to prove, as far as statistics can prove, the influence of light on health and disease. It is true, that the statistics which have come under my notice only show the bearing of the want of sunlight on scrofula; but we mentioned at our last meeting, that, in regard to the relation between scrofula and phthisis, science, after eighty years of progressive labor, has returned to the point where our predecessors stood at the end of the last century. True, we no longer believe in the dogma of the scrofulous acrimonia, which can develop, under certain circumstances, into consumption, cancer, scurf or itch; but we know these little facts, that we may regard a scrofulous child as a probable subject of phthisis; that, in a scrofulous subject, a swollen gland may undergo the same cheesy metamorphosis as we observe in the lungs; and that from a scrofulous gland an emigration of cells may take place, invading the pulmonary tissue and producing there the tuberculous or consumptive process.

Thus much we can safely say, that all the agencies which influence a development of scrofula will have the same bearing on consumption, and that the statistical observations of the influences on the one disease hold good also for the other.

But medical statistics fall short in this one point, that not enough regard is paid, and often, cannot be paid, to the particular circumstances in which the individuals are placed. Only occasionally, happy chances open to the observer a field of study where equal influences are bearing on a group of objects placed in equal relationships. Such a favorable field of observation is brought before our eyes in a very important paper by Dr. Vogt, showing the influence of sunlight on health and disease and on the rate of mortality.

In the city of Berne (the capital of Switzerland), there is a certain long street—Aarberger street—where, as in some

of the modern, newly-built tenement houses in Richmond, the tenants receive light and air only from the "front." This street has the reputation of being an unhealthy one, the rate of mortality being 40.5 per 1,000, whilst in the rest of Berne the rate of mortality is only 24.8 per 1,000. Dr. Vogt undertook to investigate the causes of this increased rate of mortality. At the time of his researches, the inhabitants of the above-mentioned street numbered 1,108—all of the same class, mechanics and laborers—living by the work of their hands. No child in this street was born with a silver spoon in his mouth; on the other hand, the ghastly side of poverty was nowhere to be seen. They all breathed the same air, and their water supply came from the same source. No other difference in the surroundings could be detected than this: That the one side of the street had a sunny, the other a shady exposure. On the sunny side, they lived rather more crowded than on the shady side, averaging six rooms for ten people on the shady, and only five rooms for ten people on the sunny side.

The result of Dr. Vogt's researches was that the greater part of the mortality occurred on the shady side, although this was less crowded than the sunny one. I quote the highest figures of mortality:

In pyæmia and erysipelas, 6.7 death on the shady, to one on the sunny side.

Typhus, 5.4 deaths on the shady, to one on the sunny side.

Consumption, 3.5 deaths on the shady, to one on the sunny side.

Nothing can prove more convincingly the effect of sunlight on health and disease.

The influence of sunlight tells on all men; still more does the want of it, during a long sojourn in darkness, do so. The evil effects of its absence manifested themselves in the prisoners who, in by-gone days, were flung into dungeons into which a ray of light never penetrated. It has farther been shown that in cities where, as the density of the population increased, the access to immediate sunlight decreased, and where whole families grew up in the semi-darkness of cellars and other gloomy habitations, *there* was, not

only an increase in scrofula and phthisis, but of many other forms of disease, as muscular debility, nervousness, dyspepsia, disposition to hyperæmia, congestions and hæmorrhages and mental debility—the condition of the parents showing itself also in a degenerate progeny.

Having demonstrated this point, I might close the discussion with the exhortation: “Go ye, therefore, into all the chambers, unbolt the shutters, tear down the curtains and let the sunlight stream in, etc., etc.,” or with words to the same effect.

But if the question be put: How does sunlight affect our organism, we should be compelled to say that, in the present condition of science, we cannot give a direct answer, unless we honestly admit we do not know. In this, as in every other study, when we have arrived at the point to know that we do not know, then, and only then, are we on the road to know. Let us proceed like a lawyer, who, in an intricate case, seeks evidence in every accessible quarter.

Interrogating physiology, we notice, first, Moleschot’s explanation: “The sun acts on our organism (*a*) through the eye, and (*b*) through the skin.”

(*a*) The stimulating action of sunlight through the medium of the retina; the powerful excitement of successive visual impressions acting on our voluntary and involuntary movements, on nutrition, respiration and other vital functions, are facts not admitting of any doubt. Nevertheless, we will quote one single example to prove it in a striking manner.

We will call to the witness stand the goose. We have to fetch her from far away—beyond the ocean—from the fair city of Strassburg, on the Rhine. It is an old story she has to tell, and she has already told it more than once before a similar audience to that which now listens to her; but she has told it formerly more as a warning to the lazy. Her evidence shall be taken to-day from a different standpoint.

The people of Strassburg carry on a very lucrative industry, viz.: “Goose-stuffing.” As in many other old industries, there is a certain hereditary skill transmitted from generation to generation, with which others cannot successfully

compete. The goose, arrived at the adult age, is shut up in a narrow cage, in total darkness, "stuffed" twice a day, and killed before the end of the fourth week. At this time, the goose has lost all power of locomotion, and if the killing be delayed only a few hours, the goose dies (probably from an accumulation of carbonic acid in the blood), and her flesh is no longer saleable. A glance at the earthly remains of the goose shows fatty degeneration everywhere, especially an immensely enlarged fatty liver. This anatamo-pathological specimen; embalmed in spices and truffles, and buried in grease and paste, is sent as a great delicacy, under the name of "Pate de foie gras de Strassbourg," throughout the whole civilized world.

I do not know whether you have ever tasted the anatamo-pathological preparation; you might find it at the Broad-Street European store. As gourmands in this virtuous city are rare, and sale not brisk, the thing might be several years old; but I think a stomach that has made up its mind to incorporate an anatamo-pathological preparation will not care much whether it be fresh or stale.

Now, what this unhappy goose shall prove is this: That the total absence of any stimulus to the retina is here a main condition of success. Without the help of darkness, the morbid process might go on all the same, only much more slowly; the animal could longer resist the stuffing treatment and thus cause a pecuniary loss to the manufacturer of disease. In former times they blinded the goose by piercing its eyes with a hot iron. They clung, with the tenacity of ignorance, to the notion that this operation was indispensable, and only in recent times have philanthropists succeeded in convincing them that the less barbarous method is equally conducive to success.

How is it, now, with the poor blind man? He is not exactly in the same position as the goose; he is not stuffed; on the contrary, he has often not enough to eat. But as his bodily engine accomplishes less work, it needs less fuel, and he should eat less than his seeing brother. Should he stuff himself and sit lazy and motionless, he would run the risk of sharing the fate of the goose.

(b) Action of the sun through the skin; Concerning the action of sunlight through the skin, it shows no more effect on the naked savage, or the half-naked Lazzaroni who lies on the shores of the Bay of Naples, basking in sunshine, than on civilized man, who, covered with textiles from his toes up to his chin, presents only a small fraction of his skin surface to the action of the sun. This action—rather of heat than light—manifests itself locally on every exposed portion of the skin, producing a certain degree of hyperæmia, erythema, with subsequent deposit of pigment (coloring matter) in the epidermis, the pigment molecule being firmly adherent to the epidermis cell. This pigmentation is not alike in every individual, showing more intensely in the robust, and less in the weak—the anæmic, and especially the consumptive never becoming sun-burnt.

This deposit of pigment has been considered as a specific action of the sun; and to prove it, the fact has been advanced that artificial heat does not produce the same effect—persons working in hot localities, in proximity to ovens, for example, bakers, etc., rather acquire a pale complexion.

On the other hand, long continued exposure to cold, sharp air, also provokes, in the exposed parts a deposit of pigment.

Certain other causes, various modes of pressure on, or irritation of, the skin are also apt to produce pigmentation. It shows on the shoulders when heavy loads have been carried for a long time; a streak of pigment often marks the place where the garter presses. On places, especially between the shoulder blades, where the pediculus vestimenti (the clothing louse) has been preying and marching for a long time, large, long streaks of pigment may be observed. It has also happened that a mustard plaster or a fly blister has left behind a corresponding patch of pigment. It might be well to remember this fact when we are about to apply a blister on a fair face or body—just for the sake of doing something.

In connection with this subject, it might be well to mention that the sun, to which popular opinion attributes the power to produce the so-called summer freckles, stands in no stronger causal connection with these freckles than the liver

with the so-called liver spots. Lentigine, summer freckles, which can rarely be observed on children under six to eight years old, appear in the heated season more marked, deeper in color; but a closer inspection with tension of the skin by the fingers and with the aid of a strong light, can detect them at every season of the year. Moreover, they often appear on parts which are never exposed to sunlight, for example, on the genital parts of both sexes; occasionally one meets with a penis with beautiful markings.

This spontaneous or idiopathic pigmentation may be considered as a *lusus naturæ*—a sport of nature—constituting a variation of the teguments, a spotted skin, which we find much more frequent and more pronounced amongst our Mammalian cousins—the dog, the horse, the pig, etc., the spots in the hair or fur corresponding exactly to pigment spots on the denuded skin.

Frederick I, of Prussia, once took it into his head to produce, by sexual selection, a race of giants; had it entered his royal head to produce, by the same means, a spotted race, his chances of success would have been equally good.

However, I am wandering from the subject, and will say, in conclusion: I have no facts, showing, in a satisfactory manner, any specific action of the sun on our organism through the skin.

Moleschott has further shown that, all other circumstances being equal, the organism, under the influence of sunlight, eliminates more carbonic acid than it does in the dark; and that the quantity of the eliminated carbonic acid increases in proportion to the intensity of the light. Dellenburg and others, experimenting with more exact methods, found the fact correct, but the excess of the exhaled carbonic acid was so small, that no great importance can be attached to it.

The disinfecting action of the sunrays and their influence on the production of ozone are admitted facts, but do not advance our enquiries.

A parasiticial influence has also been attributed to the sunrays. I have no facts to advance. I only know that many of the Cryptogames, mould, fungi, etc., do not prosper in sunshine.

Donders, and other physiologists, have recently demonstrated that, under the influence of sunlight, the respiration is stronger, deeper and quicker than in the dark; that in darkness respiration becomes slower and more superficial. The same takes place in an atmosphere charged with carbonic acid. We will endeavor to throw more light on this fact.

Sallying forth from gloomy, stuffy sick-rooms, or studies, into the fresh open air and bright sunlight, we feel, especially, if we can prolong our sojourn over a length of time, a great change come over us. All the vital functions—by interchange of matter (nutrition)—have gained in energy; our appetite increases, we breathe with pleasure and satisfaction and feel, in a certain way, the expanding of the thorax; even the mental powers are increased. All this cannot be accomplished without an increased supply of oxygen, consequently of air, which can only be furnished through stronger and deeper inspiration. Consequently, the deeper and stronger inspiration must have been brought about by an agency not present when we were in the stuffy sick-room—namely, sunlight.

Stronger and deeper inspiration—is this merely a question of taking in a greater or lesser quantity of air? The vast difference between superficial and deep inspiration and the effects which are produced by this difference on the whole circulatory system, I hope to be able to show you in the following brief sketch which reflects the views of Mordhorst, of Funke, and Latschenberger, of Wundt, and other eminent physiologists.

If we take a full and deep inspiration, along with the expansion of the thorax, a considerable distention of the lungs takes place. This is accomplished through the action of the thoracic muscles—the natural tendency of the lungs being to contract—not to expand. At the beginning of a deep inspiration, the air in the lungs becomes at first rarefied, till enough outer air has penetrated to fill them. During a deep inspiration, the circumference of all the alveoli is considerably increased, each alveola becoming expanded and enlarged. In consequence, according to Funke and Latschenberger, the capillary vessels, which surround those cells like a net-

work, become distended, elongated and narrowed; their capacity is lessened; they hold at this moment considerably less blood than during the expiratory act. The blood they contain and the blood ascending from the veins of the body is, by the energetic intra-thoracic aspiration, rapidly emptied through the *venæ cavæ* into the right auricle, to be disposed of by the action of the heart.

In weak and shallow inspiration, a modification of all these occurrences is to be observed. Through the imperfect expansion of the alveoli, the surrounding capillary net-work always remains nearly filled with blood; the intrathoracic pressure is lessened, the aspiration of the blood from the venous circulation is weaker, the stream of blood moves slower, the pulmonary artery, both *venæ cavæ* and the right heart appear less filled—consequently the work of the heart is lessened.

We may safely put it down as a fact, that the condition of the lungs, in a shallow-breathing individual, during the act of *inspiration*, approaches the condition of the lungs in a vigorously breathing person during the act of *expiration*.

We may now conceive how, through the stasis of blood which takes place in the lung-capillaries during shallow or superficial inspiration, in the course of time a chronic hyperæmia can be evolved, which renders the lung tissue vulnerable to every injury, and we gain an insight into the manner in which the ground for further inflammatory processes, and for the ultimate development of consumption, is prepared. And we can further conceive how these occurrences must certainly take place in a higher degree in the apices, where the action of the thoracic muscles is reduced in power.

If we now appeal to pathological anatomy, Rokitsansky again to the front, will demonstrate that the paralytic thorax is characterized by weak, pale, sometimes atrophied muscles; tender construction of the blood vessels, disposition to hyperæmia and inflammation and a smaller heart.

The anatomo-pathological fact that the paralytic thorax is accompanied by a smaller heart, is here again in harmony with the physiological fact, that in consequence of the superficial breathing, the heart muscle has less work to perform.

An instance of a similar alteration of tissue, consequent upon blood pressure and blood stasis in the veins and capillaries, is furnished by the leg sores which, before the introduction of steam, were much more frequent than now, forming at that time the standing cases in the cliniques and hospitals of the industrial centres of Europe. Steam power has now taken the place of muscle power; but forty or fifty years ago, the turner in wood, bone and metal, the grinder of tools and all sorts of instruments, the polisher of metal ware, etc., had to stand daily twelve to fourteen hours on his legs, treading the wheel with his feet. Consequently, great and constant pressure in the veins and capillaries of the lower limbs; morbid changes of the tissues in which those blood vessels are imbedded; great vulnerability of these tissues, and long-standing sores, ulcers, œdema, eczema, etc.

We find a similar condition in pregnant females, when the increased pressure in the abdomen impedes the free circulation of blood in the femoral veins.

We have gathered enough evidence for this evening to enable us to draw some conclusions. All that I have hitherto said, has no other pretension than to incite your thought and suggest a theme for further study.

Starting with the question, What influence has sunlight on the conservation of our health in general, and how does it exercise a preventive action against the inroads and ravages of phthisis? we honestly admitted that we did not know, but would endeavor to seek a road leading to knowledge.

Inquiring into the various modes in which sunlight influences our organism, we have dwelt at some length on two of them—(a) the action of sunlight through the retina; (b) its influence on respiration.

The action through the retina was very easy to explain; not so easy to understand was its influence on respiration. Admitting the fact that sunlight increases the energy of respiration, and that the want of it produces superficial or shallow breathing, we had to go over some physiological details to find an explanation for the pernicious effects of shallow breathing.

Out of this multitude of arguments, we may gather and carry home a few conclusions worthy of notice.

1.) A paralytic thorax constitutes the main characteristic sign of the predisposition to consumption.

(2.) A paralytic thorax, through the imperfect action of the muscles, renders respiration feeble and superficial.

(3.) Superficial respiration can be brought about, even in a well-developed thorax, by various causes; one of them is the want of sunlight.

(4.) The person afflicted with a paralytic thorax, is less able to dispense with the inciting influence of sunlight than his more happily constituted fellow-man.

(5.) Superficial respiration, carried on through a long period of time, creates in the capillary system of the lungs a stasis of blood, followed by a chronic state of hyperæmia, which renders the subject more impressible to the evil influences which favor the development of consumption.

(6.) Respiration stands in direct rapport with circulation and nutrition. The stronger and deeper the respiration, the more rapid the flow of blood, the more active the nutrition and all the vital functions.

In the light of these conclusions, we are able to explain many occurrences of daily observation. For example, it has been noticed that celebrated singers, male and female, have at all times contributed a comparatively small contingent to the great army of consumptives. The explanation is, that the lung gymnastics to which their profession compels them counteract shallow breathing.

We often hear of persons leading for a long time a life of sadness, grief and dreariness—of moral misery—which ends in consumption. Nothing can be more conducive to shallow respiration than sitting bent under the weight of such emotions.

We see wild boys, with hereditary predisposition to consumption, pass their boyhood in perfect health and merri-ment—consumption developing itself in later years. It is their very wildness, necessitating exposure to sun and air, which counteracts superficial respiration. When they be-

come tamer, harnessed to business, and more inclined to play the gentleman, the counteraction ceases.

Enough of these examples.

If we are guided in our action by the indications of these conclusions, the only loser will be the apothecary. These indications are :

1. *Sunshine* as much as possible in the open air, when the thermometer is below 80°. Condemn every room as uninhabitable into which the sun cannot stream freely and fully for at least four hours a day. Condemn in such rooms all those dust and germ-traps which hang as draperies and curtains inside the windows, obstructing the light of the blue heaven, and stealing away the sunshine.

2. Muscular exercise. This boy here, with hereditary predisposition—who comes from his jump and run, panting and puffing, and frightens his over-anxious mother out of her senses—he has, in the last half hour, done more for himself to avert threatening evil, than all possible and impossible tonics can do for him during his lifetime.

Gymnastics in the open air calculated to develope and invigorate the thoracic muscles, with a view to counteract superficial breathing, should be carried on, daily, all the year round. German turning should be introduced everywhere. English boxing and American base-ball are the next best exercises for the purpose. A great many methodical exercises have been devised, which even the feeble and delicate can execute. The following is one of the best: The subject is to run up and down for half an hour at least, twice or more a day, in the open air, in a garden or any open place protected against dust; with every inspiration brandishing both arms over his head, and letting them drop with every expiration. Every muscle which plays a part in respiration is hereby exercised.

3. Substraction of heat. The best means to counteract the threatening or already existing hyperæmia of the lung capillaries, is reduction of temperature—substraction of heat from the skin by cold ablutions, applied to the thorax or the whole body.

Substraction of heat is, in this community, a very favorite remedy, especially among persons of the fair sex; only it is applied to the wrong place—to the inside of the stomach—precisely the organ which requires heat to accomplish its functions. That practice of sipping and nipping all day long from the ice-pitcher, is a bad one; still worse the fashion, spreading more and more every year, of eating ice-cream for dessert—a time when the stomach requires all its heat. To persons of delicate health, with whom the digestion is always slow and laborious, this practice is doubly injurious. My advice to such persons is: If fashion commands the buying of ice-cream, buy it; but, in order to derive some benefit, instead of harm, from it—rub the chest with it.

4. The senses of sight, hearing, and even of taste, should be furnished, at proper intervals, with pleasing impressions. This contributes to increase the energy of nutrition—more oxygen is consumed.

5. As dulness, like sadness, tends to depress the energy of respiration, joy and mirth will have the contrary effect. Hence, pleasure, amusement, recreation, music and feasts, frolic and fun should be promoted.

Man, in society, has his serious duties to perform; and perform them he must. Work is not play, and mechanics and merchants cannot carry fiddles and trumpets into workshops and warerooms. But, "*Six days shalt thou labor, and do all that thou hast to do; but the seventh*"——Here stop—a ghost—a shade from the realms of soul hygiene, beckons to me; it is not for me to argue with him. Light—light diffused by science—will in time penetrate even his dark corner. I bid him *avaunt!*

ART. IV.—**A New Ovarian Trocar.** By JOS. H. WARREN, A. M., M. D., Physician to Massachusetts Home for Intemperate Women; Member American Medical Association; Member British Medical Association; of the Massachusetts Medical Society, etc. Boston.

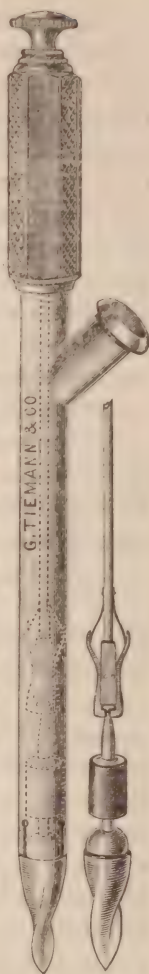
The instrument herein described, and illustrated, consists of a canula 1.5 cm. in diameter, having an exit tube joined to it at an angle of 30° at a distance of 15 cm. from the end. The end has four longitudinal slits, arranged longitudinally.

The handle is of hard rubber, and is placed around the canula back of the exit tube. The open end of the handle has a ring screwed into it, having a conical bore, the base of the cone looking inward.

The cutting part of the trocar consists of a wedge shaped point, having two spiral cutting edges opposite each other—the size of the point gradually increasing from the point backward. This point is free to revolve on a spindle inserted in its base. The base is hemispherical, and has a slight groove to allow the canula to fit tightly and form a continuous surface with the cutting point. The spindle is fitted with a piston. The free end of the spindle has a cone-shaped head.

The staff consists of a rod having at its end a pair of small spring nippers, the jaws of which are like claws, and engage with the head of the spindle. The cone of the head fits a depression in the end of the rod, so that when the spindle is connected to the rod by the jaws, it is held firmly without any end motion, and becomes continuous with the rod until released by pressure on the arms of the nippers. This is effected by the cone-shaped bore of the ring in the handle as follows: The rod being drawn out by the knob on its end, takes along with it the cutting point until the arms reach the ring; here the cone compresses the arms and so disengages the head from the claws, thus leaving the point in the canula while the rod is drawn out.

The packing on the spindle acts at first as an exhaust to start the flow of fluid through the canula, and later as a plug to prevent the flow of fluid from the trocar, so that fluid can escape only from the exit tube. This trocar has, as advantages, the revolving point, the detachable handle and the piston for exhausting the tube.



Owing to the shape of the cutting point, it enters the sac smoothly and without jerking, as has been proved by actual operation, and all those who have witnessed its use have been greatly pleased with its successful action.

This trocar has been very finely made by Geo. Tiemann & Co., of New York.

Clinical Reports.

A Case in which Chorea and Albuminuria were Associated. With Remarks. By CHARLES H. JONES, M. D., of Baltimore. (*Read before Baltimore Medical Association.*)

It occurred to me that it would not be out of place to prepare and present to the Association the history of a case of "*Chorea*"—occurring in a boy, age six years, and now under treatment.

I was called to visit this boy in December last. For some weeks before this, he had premonitory symptoms, which consisted, as his mother informed me, of lassitude, irritability of temper, and an awkward behaviour generally, with loss of sleep and appetite. When I saw this boy, of healthy parentage and one of five children, I found a great aggravation of all the premonitory symptoms. The spine was arched, head drawn backwards and inclining to the left side, simulating opisthotonus. Tongue restless in his mouth, and when protruded would also be drawn to the left side. There was diminished sensibility and motion of the left arm. His gait was unsteady and tottering. If unassisted, locomotion was impossible; in walking, one leg would overlap the other. His arms would dangle confusedly by his side, and he could hold nothing or even feed himself. In short, there was want of ability to direct and control voluntary muscles. The pulse was frequent, and there was nausea and loss of appetite, bowels constipated; urine scanty, of a pinkish color, and upon application of the usual test, found to contain about 20 per cent. of albumen. His general presence was rather idiotic. Consciousness was intact, though his perceptive powers were somewhat blunted. His articulation was wonderfully defective. He would show by a nod of the head that he understood questions addressed to him. Cardiac lesions consisted simply in enlargement of the heart,

with a slight anæmic murmur. Such was this boy's condition when I first visited him; and so continued, with but a limited improvement, for some weeks after.

Treatment consisted of free purgation with aloes, hyoscyamus, and small doses of calomel. After this he was put upon bromide of potassium, fluid extract of cimicifuga, and compound infusion of gentian, with large doses of the bromide at night. The spine was sponged night and morning with whiskey and sea salt, and occasionally a large mustard plaster was directed to be applied down the entire spine. He was ordered a milk diet, and strong beef soup. He was also ordered to be driven out in pleasant weather, and allowed to inhale the fresh air.

A few days after treatment had been begun, there was a partial suppression of urine, also a puffiness under the eyelids, and a swelling of the knee-joints. He was then ordered potass. bicarbonate, with the infusion of cascarrilla. This he continued to take for two days, or until the kidneys had resumed their normal functions and the swelling of the joints had passed away, and with this came an improvement of the general system, though the urine was still charged with albumen. The bromide at night was withdrawn. I then ordered for him the elixir of the phosphate of iron, quinia and strychnia in dessert-spoonful doses three times a day. Continuing the use of the local applications to the spine, and attention to the bowels, with more of an animal diet.

He is now under this treatment, with the addition of cod-liver oil. I have great faith in cod-liver oil, and prefer the pure oil to an emulsion.

So much for the history and treatment of this case, which has been condensed and hurriedly thrown together.

May we not pause and briefly enquire into the etiology of this ailment? It is universally accepted that chorea is essentially a spinal affection, and its occurrence is an indication of impairment of nerve power, or defective innervation; and it is as equally accepted, that in children, or even in those of older growth, dentition, worms, constipation, rheumatism and syphilis, either recent or hereditary, are important factors in the production of chorea.

Though recognizing the important relations existing between these conditions and the subsequent development of chorea, I am inclined to exclude these from all identity in the production of the disease we have been considering.

The etiology of this case must be sought for through some other channel, because none of them were the antecedents of this child. Of all the causes enumerated, rheumatism is perhaps the most frequent cause of chorea.

In this case there was no evidence that rheumatism had at any time been associated with this child. An examination of the heart showed no sign of the disease; and except the swelling of the knee-joints, there was no other symptom indicating the disease. And this swelling did not show itself until some time after he had been under treatment. His parents had never been afflicted with rheumatism.

Chorea is an affection classed as one of the neuroses. It is usually functional, and has a favorable prognosis. This *is not* always the case. It may be, and often is, the effect of some pre-existing organic trouble—constitutional or otherwise.

We know that albuminuria will cause coma, convulsions, and cardiac affections; and when these conditions thus occur we pronounce it a case of uræmia. Why may not this same morbid influence act by special preference on the nervous centres, and thus induce chorea?

This is simply alluded to as being the probable cause of the affection in this child, with the hope that we may be able to separate cause from effect, and ascertain what are the collateral relations existing between albuminuria and chorea.

Original Translations.

From the French and German. By WM. C. DABNEY, M. D., Charlottesville, Va.

The Use of Ergot in Certain Affections of Bones.—M. Musgrave Clay read a paper with this title, at the meeting of the French Association for the Advancement of Science, in August last. We take the following abstract from *Le Progrès Médical* of September 9th. After referring to two cases in which the drug had been employed for disease of the osseous structures by M. Duboué, of Paris, he stated that he had himself given it in one case of “osteo-arthritis” of the

elbow. After making an incision into the peri-articular abscess, M. Musgrave Clay gave to his patient (who was a child six years old) ergot of rye, commencing with a dose of 40 centigrammes, and gradually increasing till 70 centigrammes were given at a dose. The treatment lasted a little less than three months; it was suspended when the child began to complain of cold feet. At the time treatment was begun, suppuration was quite profuse, but the improvement was rapid. In less than eight days, there was a decided change for the better. At the present time there is scarcely a trace of the affection remaining; though, if careful examination is made, it will be found that the movements are slightly restricted. The author begs that ergot be tested in analogous cases, and especially in cases of inflammation of the bony structures, and expresses the belief that good results will be obtained.

The Administration of Ergot in Typhoid Fever.—M. Deboué seems to be a firm believer in the value of ergot in various diseases. We have just seen that he suggested its use to M. Musgrave Clay in certain diseases of the bones; and he read a paper before the Académie de Médecine on September 5th last, in which he recommends the same drug in typhoid fever. He says he has employed it for many years with excellent results, and he thinks it applicable in all forms and in all stages of the disease. Pregnancy, he says, does not constitute a contra-indication to its use; it is only necessary to lessen the dose. In 51 cases treated with this agent, of which 36 were under M. Deboué's personal observation, there was a mortality of only six per cent. In small doses, he considers ergot a perfectly harmless medicine, provided it is fresh; if it is not fresh, it is inert, or it may even be dangerous. It should be pulverized and mixed with half its weight of sugar, and then administered in rice paper, in doses of 25 centigrammes. This dose may be increased in a child to 40 or 50 centigrammes, and in an adult to three grammes. Now and then only, in his experience, did it cause nausea or vomiting; but this disappeared after three or four days, unless the ergot was of bad quality. Usually, it was tolerated perfectly. The dose should be regulated by the temperature; but even after a very decided fall in the body heat, the medicine should be continued in smaller doses till convalescence is pretty well established. The good effects of this treatment are sometimes manifested very rapidly, as soon even as the end of the first week—the fever afterwards continuing, it is true, but in a much milder form.

The Cardiac Form of Typhoid Fever was the title of an interesting paper read by M. Bernheim, of Nancy, before the French Association (*Le Progrès Médical*, Sept. 23d). In this class of cases, the author includes those cases in which, without perceptible organic alteration of the heart, without any pulmonary or other complications sufficient to account for the condition, the pulse becomes small, frequent and compressible; and the patient succumbs to this paralytic condition of the heart, which may come on either in the early stages of the attack, with or without concomitant nervous depression, or else at a later period of the disease, when the vital forces have become exhausted. The fever may be quite high, or the temperature may be normal, or even below the normal.

M. Bernheim thinks that this depression, or cardiac weakness, is due to the direct action of the poison on the centre of cardiac innervation. As a general thing the pulse is less frequent in typhoid fever than in the other pyrexiae—the typhoid poison, like digitalis, appearing to produce an inhibitory effect on the heart's action; like digitalis, too, this poison may sometimes be present in the system in such quantity as to cause a paralytic acceleration of the heart's action. This view explains, the author thinks, the reason that digitalis is not only not beneficial in these cases, but is positively injurious. Ten cases are reported in the paper—in all of which autopsies were made. The conclusion at which he arrives is, that sudden death in certain cases of typhoid fever, when there is no appreciable alteration of the heart, may be due to the sudden concentration of the poison on the cardiac centre. This is the “foudroyante” variety of the cardiac form.

M. Henrot stated that he had seen sudden death occur in typhoid fever of moderate severity, after a slight movement. In this case, however, there existed a fatty degeneration of the heart, and irregularity of the pulse was observed.

M. Leudet asked if it was not possible that there might be cases in which the typhoid poison acted with especial violence on the medulla spinalis, especially in its upper part?

[During the past summer, a lady under the Translator's care, who had a moderately severe case of typhoid fever, died very suddenly, after she had commenced to improve, evidently from cardiac trouble. No autopsy was allowed; but her pulse had been regular, and not over ninety for two weeks prior to her death.]

Osteotomy and Tarsotomy in the Treatment of Congenital Club-Foot.—M. Guérin read a paper on this subject before the Académie de Médecine, on September 19th last (*Le Progrès Médical*, Sept. 30, 1882). He condemned, both in principle and practice, the ablation and resection of the bones of the tarsus, as a method of treatment of club-foot in the infant. This method, which causes useless and dangerous mutilation, may always be replaced by the true orthopædic method, which consists in the division of the tendons and of contracted bones, massage and orthopædic appliances. Even those cases which are incurable by these means, are scarcely proper ones, he thinks, for tarsotomy. Indeed, he states that it is better to let the deformity alone, and to counteract it simply by appropriate apparatus, than to resort to so hazardous an operation. It is not fair, he says, in order to justify this operation for club-foot, to refer to its usefulness in *diseases* of the bones of the tarsus. The cases are certainly different.

M. Tillaux stated that there were two varieties of club-foot to be considered; or, rather, the deformity as it occurred in two different conditions—childhood and adult life. In childhood, the measures which M. Guérin approved were usually efficacious, and should certainly be resorted to in preference to tarsotomy; but in adult life, when the patient was 25 or 30 years old, massage and tenotomy are perfectly useless, and tarsotomy alone holds out a reasonable prospect of relief from the deformity. In such cases, he would not hesitate for a moment about resorting to this mode of treatment, provided it was justified by the other circumstances of the case.

M. Guérin replied, that when stating his very decided objections to tarsotomy, he was referring entirely to the affection in young children. He recognized the fact, that it was in these cases only that the deformity could be remedied by orthopædic apparatus. Tarsotomy was certainly applicable in certain cases where the subjects were adults; but even then great caution should be exercised to select such cases as were suitable to such a mode of treatment. No absolute rule could be formulated for the guidance of surgeons in these cases, and it must be left to the individual judgment of the operator which course to pursue.

Iodoform in Diabetes Mellitus.—By Prof. Jacob Moleschott (*Wiener Med. Wochenschr.*, 17-19, 1882). Prof. Moleschott reports five cases of diabetes mellitus which were treated with iodoform, and the result in these cases lead him to the

following conclusions: Iodoform is a remedy of much promise in this disease. A few days after the commencement of the iodoform treatment, there is a marked reduction in the amount of sugar discharged, and in a few weeks it disappears entirely from the urine. If, however, the saccharine matter again appears, after the remedy has been suspended for a few days, it is an evidence that the disease is not cured, and the iodoform should be repeated in larger doses. Furthermore, it was noticed that there was a marked improvement even in those cases where an unsuitable diet was persisted in, or when the patient had to contend with harassing care and excessive work. Finally, iodoform produced curative results, in some cases, after a faithful trial of salicylate of soda had been made without effect. This agent (salicylate of soda) had been used in doses of three or four grammes daily; and there was, it is true, a decided diminution in the amount of water and of sugar under its use, but the effect of iodoform was far more prompt and more lasting.

The dose of iodoform to commence with, is from 10 to 20 centigrammes, but it may be increased to from 30 to 40 centigrammes a day. To conceal the disagreeable taste and odor, he advises that it be given in the form of pill, and combined with tonka-bean.

The Action of the Induction Stream in Chronic Catarrh of the Stomach, Dilation of the Stomach and Chronic Ulcer of the Stomach.—By Dr. Julius Sternitz (*Brislauer Arztl. Zeitschr.*, No. 13, 1882). The writer states that the application of the Faradic current in chronic affections of the stomach, is a recent thing, and then refers to the very unsatisfactory results obtained under the old methods of treatment by medicine, diet, counter-irritation, etc. He advises that the two poles of the battery should be placed over the stomach, but as far apart as possible. The plates or sponges should be very broad, and may be applied either vertically or horizontally. A mild current should be employed first, and it may be increased afterwards. As a rule, there should be two sittings each day, and each sitting should last about five minutes. In some gastralgia with copious vomiting, he obtained good results; and he calls attention to the fact, that the faradization is free from the objection of most of the remedies which are resorted to in these cases, inasmuch as it has no injurious after effects. In chronic catarrh, excellent results have been obtained, even where it is complicated by chronic ulcer of the stomach.

Analyses, Selections, etc.

Eczema of the Anal and Genital Regions.—A very common accompaniment of eczema of these regions is a greater or less congestion of the portal and hæmorrhoidal circulation, manifested by a purplish congestion of the mucous membrane of the anus, or very commonly by a greater or less degree of internal or external piles. These latter may not be sufficient to be recognized by the patient, and yet be an element indicative of the existing state which must be regarded.

When this state exists, the well-known mixture of precipitated sulphur and cream of tartar should be given in sufficient quantity to secure one or two loose movements from the bowels daily. It should not be given with syrup, as this often ferments in the stomach, or acts injuriously in some other manner. The mixture should be equal parts of sulphur and bitartrate of potash, and the dose is one or two teaspoonfuls rubbed up with water into a paste, to be taken at night on retiring.

When there is no marked hæmorrhoidal congestion, use a pill of two grains and a-half each of blue mass and compound extract of colocynth with a quarter of a grain of powdered ipecac in each pill—two to be taken at night and two on the second night after, followed each morning by a Seidlitz powder or Kissingen water. These pills should not be used at less intervals than a week or two.

If there is simply a sluggish action of the bowels, a pill may be used composed of one-half grain of extract aloë. Soc., with one grain of dried sulphate of iron and a little aromatic powder and confection of roses, one pill after eating. Much may be attained in the way of overcoming the constipated habit if these pills are used as follows: At first, one pill is given directly after each meal; in a few days the noon pill is omitted, and a few days after the morning pill also, and later the evening pill is required less frequently and finally omitted. They must be used until a daily action from the bowels is acquired. As a rule, it is unwise to give cathartic mineral waters to these patients, because these waters constantly stimulate the intestinal tract by too energetic action. [This is true of powerfully cathartic waters—such as the Congress, Püllna, Apollinaris, etc., but untrue of the Buffalo Lithia Water No. 2, which seems specially indicated in these cases, it being a *digestive* water *par excellence*.—ED.]

Next to imperfect bowel excretion, deficient kidney excretion is an element to be regarded. The urine of these patients is seldom that of health. Frequent micturition is not at all uncommon. Most of these cases require an alkali, and the acetate of potash seems to be indicated with a bitter, as—

R. Potass. acet.....	5j.
Tinct. nucis vom.....	5ij.
Infus. quassiae.....	5vi.

M.—S: Teaspoonful in water after eating.

[Effervescing bicarbonate of potash is excellent as an alkali, and much more pleasant than the acetate. Of all alkalies for promoting kidney secretion and rendering the urine normal, the Lithia water recommended above is the best of which we have any knowledge.—Ed.]

This alkaline course may be continued during the entire treatment, and frequently for some time after the complete disappearance of the itching and eruption.

Not infrequently cases of eczema of the anus and genitals will be associated with oxaluria, and will be quickest relieved by strong nitric acid internally in doses of gtt. ij after eating, largely diluted. [The well-known Mettauer's acid—equal parts of nitric and muriatic acid and water; dose, gtt. iij–viiij, in water, is often much more efficacious in these cases.—Ed.]

The mixture of magnesia sulphate, sulphate of iron, sulphuric acid, and infusion of orange peel is of much service when there is a tendency to sluggishness of the bowels, which is not corrected by diet, etc., after a course of the pills mentioned.

The disease may be due to simple debility, in which case iron and other tonics are indicated.

Arsenic may be given as a modifier of the nutrition of the skin, but never as a curative agent or as a controller of congestion or inflammatory action.

Local measures are of as great importance as internal remedies in these cases. The soothing plan should be followed as far as possible. Hot water is a valuable remedy in relieving the congestion of the parts and the consequent itching, but it should be *hot*, not simply warm. The patient should sit on the edge of a chair and have a basin with very hot water and a handkerchief in it. The latter is taken up and held in a mass to the anus or genital parts, as hot as can be borne, say for a minute, and then dipped in the water again, and the process repeated three times, the whole lasting not more than two or three minutes. Before the hot water is

gotten ready, the ointment to be applied should be spread thickly on the woolly side of surgeon's lint, cut to fit the affected parts only, and put by for immediate use. After using the hot water, the parts are rapidly dried with a large, soft napkin *pressed* upon them, with *no* friction, and the ointment applied as quickly as possible, so as to exclude the air.

Ordinarily the hot water is to be used only at bed time, and the patient must not scratch the parts. But the hot water may be used more frequently if the itching recurs—though the ointment may be repeated once or twice during the day without the hot water. The ointment should never be rubbed in, but always spread on lint, and the fresh cloth should be ready to put on as soon as the other one is removed, in order to prevent access of air. Various ointments are used. A good one is—

R. Unguent. picis..... $\bar{5}j$.
Zinci oxid..... $\bar{5}ij$.
Ung. aquæ rosæ (U. S. P.)..... $\bar{5}iij$.—M.

This should be of consistence to spread easily and remain soft. Vaseline and cosmoline should not be used, as they rapidly soak in and leave the parts dry and exposed.

Another very effective ointment is—

R. Unguent. picis..... $\bar{5}iij$.
Unguent. bellad. $\bar{5}ij$.
Tinct. acon. rad..... $\bar{5}ss$.
Zinci oxid..... $\bar{5}j$.
Ung. aquæ rosæ..... $\bar{5}iij$.—M.

The ointment of chloral $\bar{5}ij$, and camphor, $\bar{5}j$ to the $\bar{5}j$, is an efficient antipruritic.

Lotions are often of service, especially in eczema of the penis and scrotum, and the following can be recommended:

R. Bismuth subnit..... $\bar{5}ij$.
Acid hydrocyan. dil..... $\bar{5}j$.
Emuls. amygdal..... $\bar{5}iv$.—M.

This must not be used if the skin is much torn or broken.

When the congestion has ceased, and there is still some thickening and a tendency to slight fissures in the skin, the green soap, compound tincture of green soap may be used—

R. Sponis viridis.....
Olei cadini.....
Alcohol..... $\bar{aa} \bar{5}j$.—M.

With this we need friction; and a piece of muslin or flannel is wet with the lotion and rubbed briskly over the parts for a few moments, and then it is well to use a mild ointment. For this the ordinary zinc ointment answers very well, or

subnitrate of bismuth or calomel ʒss to ʒj of unguentum aquæ rosæ.

If a tendency to slight fissures of the skin still remains, we may touch the parts very carefully with the silver stick, and afterwards packing in a little cotton upon the parts. This must be used with caution.

Eczema of the female genitals presents some features still different from those in men, and is often very rebellious, but is, in the main, entirely amenable to very carefully directed treatment on the plan here detailed, and that in a reasonably short time.—*L. D. Bulkley in N. Y. Med. Record.—Canada Med. Record*, August, 1882.

Convallarine.—Professor Germain Sée has brought to the notice of the Academy of Medicine a new substance, which promises to be of great therapeutic value. It is an alkaloid extracted from the *Convallaria majalis*, or the lily of the valley. This new alkaloid has been discovered by Dr. Hardy, an eminent chemist, who also discovered the alkaloid from the jaborandi, to which he gave the name of "pilocarpine." Convallarine, the name of the new substance, has been experimented with by Professor Sée at the Hotel Dieu, in conjunction with Dr. Hardy, of which hospital the latter is *chef du laboratoire*. Its therapeutic action is compared with that of digitalis, for which it may be with advantage substituted, as it has none of the inconveniences attributed to digitalis. Dr. Hardy was led to make researches with this plant from the fact of its being generally used by the peasants in Russia, who employ the herb in dropsies, and in all cases requiring increased diuresis. According to Professor Sée, the convallarine is a powerful diuretic, and it has a marked influence on the contraction of the heart, which it regulates, while it lowers the pulse in a remarkable manner.—*Lancet*, July 15, 1882—*Practitioner*, Sept., 1882.

A Study of the Action of Iron.—(Abstract of a paper read by Francis H. Williams, M. D., of Boston, Mass., before the Massachusetts Medical Society, June 14, 1882.) The author thinks that iron has a toxic action—old authorities to the contrary notwithstanding; but he says that the manifestations of its action are not as marked as, and its study is less interesting than, that of many other drugs, particularly those acting on the nervous system. Experiments were made on frogs, regarding the action of the metal when introduced into the veins. For many reasons, a fresh, clear solution of

the tartrate of iron, neutralized with caustic potash, was thought to be best, as it caused no inflammation at the point of injection, and did not cause thrombi. A small quantity of this solution would kill a frog in twenty-four or forty-eight hours. It was equally poisonous to pigs and rabbits. There were no signs of thrombosis, even in the lungs.

In order to show that it was the iron and no other constituent of the tartrate of iron that killed, a solution of the tartrate of soda was made. Injecting this in very much larger quantities than the previous solution, caused no unpleasant symptoms. The animals seemed well shortly after receiving the iron, and the appetite remained good till a few hours before death, when a disposition to keep quiet and an apparent weakness, accompanied by frequent liquid stools, was observed. In a few cases there were three or four short convulsions, accompanied by opisthotonos, lasting about ten minutes and suggesting death from asphyxia. The muscles and nerves responded to electric stimulus, both immediately before and after death. *Post-mortem* examination showed the small intestines pale and strongly contracted; the mesenteric blood-vessels were dilated; liver and kidneys very much congested. The blood in both the arteries and veins was of a dirty-claret, venous color. Arterial blood also showed the same peculiar color during life, which changed to nearly normal arterial color after being exposed to the air.

The symptoms in cats, beginning from one to three days after the injection, were loss of appetite, vomiting immediately after eating, as a rule, diarrhœa, and loss in weight—about twenty per cent. in five days. In some cases the vomited matters were tinged with fresh blood, and sometimes there were a number of dark, bloody, liquid discharges from the bowels. The vomiting seemed only to come on to empty the stomach, suggesting that the stomach was intolerant of, and sensitive to, the irritation caused by the presence of any substance—even a liquid.

Is the death in these cases connected with the alimentary canal, where the appearances are so marked? Probably not, as we have in some cases all the symptoms indicating irritability of the stomach and intestines without a fatal result. Also this seems only to prevent the animal from taking food, and death from starvation will not occur in four or five days. Death probably results in some other way. The peculiar color of the blood suggested an examination of it. Its certain changes were detected under the microscope. The amount of carbonic acid gas was much less than normal.

From this, we infer that the iron in some way hinders the blood from taking up the products of decomposition from the tissues or that the process of oxidation is incomplete. The collapse and paralysis of the central nervous system may be a consequence of diminished oxidation. This view is strengthened by the fact that the amount of carbonic acid in the blood was less and less the nearer the time of death. This action of iron is similar to that of arsenic and platinum. Hence, we say, iron has poisonous qualities without doubt; the symptoms of its action are referable chiefly to the alimentary canal, and, in fatal doses, it diminishes the amount of carbonic acid gas in the blood; the action of iron probably resembles that of arsenic and platinum, and we are justified in believing that the action of iron on man, in excessive doses, would be similar to that observed on animals.

As regards the tonic action of iron, two theories have been advanced to explain it: *First*, That its good effects are produced by its action on the red corpuscles; *Second*, That it exerts a special influence on the digestive system. As to the first, iron is a constituent of the red corpuscles. In anaemia, the number of the red corpuscles is less than normal, and after using iron they are increased. On the first theory, it is only necessary to supply a little iron in order to increase the number; and as this plays an important part in the economy, once having a large supply, good results follow. Since almost every food contains iron, it would seem that any deficit in iron can never be very great [provided, of course, the appetite for food remains good]. It is not by a few doses of iron that its good results are obtained, but only after continuous use.

For the second theory, that iron promotes digestion, when we consider its action on the stomach and circulation, there is little doubt that iron has an especial action on the digestive organs, and particularly on those portions where absorption takes place, viz.: In the stomach and small intestine. It seems to increase the amount of blood sent to these parts, especially to the villi of the small intestine; and it is probable that it exercises a beneficial influence on the process of assimilation.

Claude Bernard says that the salts of iron have a special action on the mucous membrane of the stomach, and that all parts with which it comes in contact take on a more active circulation. He attributes this, however, merely to its acting as a local irritant. [This view is clearly untenable as regards the medicinal doses, as it is evident that the mucous

membrane of the stomach and intestines would soon cease to absorb the food if kept constantly irritated.—ED.] Bartholow says: "Physicians are familiar with the fact that iron improves but little, if at all, the condition of the anæmic where it does not increase the desire for food and the ability to digest it." Arsenic is often used as a substitute for iron with good results; but there is no arsenic in the red corpuscles. [Hence the increase of the red corpuscles seems to be a consequence of better nutrition, as the author and many other authorities seem to think, as in this case, not only iron, but all other constituents of the corpuscles are furnished.—ED.] It may fairly be said, that in prescribing iron, about half a dozen of the scores of preparations may be chosen, such as the tincture of the chloride, reduced iron, tartrate of iron and potash, etc., which will answer any indication. Trousseau and Pidoux think that there are many deaths in practice attributable to the excessive administration of iron, and they insist that it is especially dangerous in the early stages of phthisis, as tending to promote hæmoptysis. It seems, then, that iron is no exception to the general rule holding good for heavy metals, and it should not be given as a medicine incapable of abuse. [The rule laid down by Bartholow seems to strike the root of the matter, viz.: That iron is beneficial only when it increases the desire for food and the ability to digest it. Hence, if it fails in these two things, it should not be given. Sometimes iron alone will fail, when, if combined with arsenic or arsenic and strychnia, it will fulfill both indications.—ED.]

Swallowing a Baby.—Dr. J. R. Harwell, of Nashville, reports in the *Nashville Journal*, September, 1882, the case of a girl three years old swallowing a baby—a china doll baby. The doll was about an inch in length, by about three lines in thickness, with legs extended and arms flexed at the elbow. On the following morning the doll was found in the dejections of the child, having traversed the entire alimentary canal. The Doctor made no prescription for the child, believing that emetics in the case would have "been improper, and even dangerous, as the irregular shape of the doll made it liable to lodge in the œsophageal tract."

According to calculations made by the Academy of Paris, there are at present 189,000 doctors scattered over the world. Of these 65,000 are in the United States, 26,000 in France, 32,000 in Germany and Austria, 35,000 in Great Britain and its colonies, 11,000 in Italy, and 5,000 in Spain.

Book Notices, &c.

Hand-Book of Surgical Diagnosis for Physicians and Students. By CHRISTOPHER HEATH, M. D., Holme Professor of Surgery in University College, and Surgeon to the University College Hospital, Philadelphia: P. Blakiston, Son & Co. Paper, 75 cents; Cloth, \$1.25.

Christopher Heath is too well-known to need praise from us. His book is just what he has named it. It is not a book on etiology, pathology or treatment, but a book of ready reference for the diagnosis of any surgical affection that is likely to puzzle the practitioner by looking like half-a-dozen other things. It is remarkable all through for brevity and conciseness, and though apparently dogmatic, is not more so than is consistent in a man of the author's position and ability.

W. G. E.

The Diseases of the Rectum, with Diagnosis and Treatment. By WILLIAM ALLINGHAM, M. D., F. R. C. S., Surgeon to St. Mark's Hospital for Diseases of the Rectum, etc. Fourth Revised and Enlarged Edition. With Illustrations. Philadelphia: P. Blakiston, Son & Co. Paper, 75 cents; Cloth, \$1.25; Both extra, \$3.

Few men have had such valuable experience in rectal work as the author of this book, and still fewer can give the results of their experience to the public in such a pleasant and able manner. With all this he combines common sense, totally rejecting all "popular creeds" not in accordance with that common sense and at variance with established clinical and pathological facts. Nor does he wait for others to establish these facts; for example, in speaking of "fistula in conjunction with phthisis," he says: "For my own part, I do not think we have many, if any, clinical facts tending to show that the operation for fistula in phthisical patients, renders the lung affection worse or makes it more rapidly progressive. In saying this I do not advocate wholesale, indiscriminate operations on *tuberculous* patients; but that, if care be taken in the selection of proper cases, avoiding interference, if possible, with *rapidly advancing* phthisis, and the operation be performed discreetly * * * * * the patients will generally do well, and be benefitted, and not damaged, by the cure of their rectal malady." It is refreshing to find a man who will take this stand and prove its

worth by successful operations, such authority as Bushe, Quain, Curling, Erichsen, Holmes and others to the contrary notwithstanding. If every one would treat rectal abscess and external hæmorrhoids in Mr. Allingham's simple, common sense way, rectal surgery would not be at such a discount with the laity. In abscess, he says that incision is imperative as soon as pus forms, as otherwise sinuses and fistulæ are very likely to result. He places but little reliance in salves, packing, astringents, etc., for the treatment of external hæmorrhoids, preferring the knife or scissors. After a careful discussion of the various methods in use for the treatment of internal piles, he thinks that ligature *with incision* offers the best chance for the patient. In more than 1,600 cases ligated, he had not had a single fatal one—certainly a very remarkable result. He condemns the use of acids, except in cases of small, granular piles, or patches of villous, bleeding mucous membrane; and altogether rejects the various caustic pastes as being too uncertain and painful. In recommending incision for fissure and painful irritable ulcer of the rectum, he says that the muscular fibres of the sphincter should be cut, so as to obtain entire quiet, at the same time discouraging an oblique incision as healing less strongly, and thereby tending to produce incontinence. But it would be futile to attempt to pick out all the good qualities of this book, and it is a long time since we have had a work give us so much pleasure and instruction at the same time.

W. G. E.

Elementos de Filosofia Quimico—Segun la Teoria Atomica.

Por VICENTE MARCANO, Antiguo Alumno de la Escuela central de Artes y Manufacturas de Paris; Miembro de la Sociedad Quimica de Paris, etc., etc. Caracas, 1881.

The scientific literature of the Spanish language is being daily enriched by the appearance of new and valuable works, and those interested in the subject of chemistry may congratulate themselves and Sr. Marcano on this last addition to its already valuable literature. The author has laid a solid foundation for his work by building it on the atomic theory, and the book, from first to last, shows that he has not deviated from that theory, which is to the chemist what the compass is to the navigator.

W. G. E.

PAMPHLETS, REPRINTS, ETC., RECEIVED, for which we have no room for further notice; but most of which can be obtained by enclosing a letter stamp for each pamphlet to the respective authors named.

Obscure Case in Nerve Pathology Accompanying Optic Neuritis. Same Author. Reprint from *Archives of Ophthalmology*, June, 1882. 8vo. Pp. 4. [Report of a remarkable case of blindness preceding affection of the lower extremities and bladder, with absence of cerebral symptoms. Death. No autopsy allowed. The chain of effects leads one to suppose that the cause which produced the blindness was operative in bringing about the sensory paralysis in other parts of the body.]

The Asylum Superintendents on the Needs of the Insane, with Statistics of Insanity in the United States. By C. L. DANA, A. M., M. D., New York, N. Y. Reprint from *Journal of Nervous and Mental Disease*, April, 1882. 8vo. Pp. 17. [A lengthy selection is to be found on page 231 *et seq.*, July No., 1882, of the *Medical Monthly*. We regard this report as important to every one.]

Diphtheritic Ulceration of the Air Passages, and its relation to Pulmonary Phthisis. By JOHN N. MACKENZIE, M. D., Baltimore, Md. 8vo. Pp. 8. Reprint from *Transactions of the Medical and Chirurgical Faculty of Maryland*, 1882. [This form of ulceration is generally in the lower portion of the trachea and bronchi, and usually occurs in the latter stages of pulmonary phthisis. It has been too much overlooked by American and English students, but has attracted much attention from the Germans.]

Color Blindness. Supplemental Report on Ophthalmology. Read before the Medical Society of the State of California, 1882, by A. M. WILDER, M. D., Sacramento, Cal. 8vo. Pp. 30. [We return thanks to Dr. W. E. Taylor, Surgeon U. S. Navy, etc., for a copy of this important paper—full of instruction and of interest to those in charge of public conveyances—whether by land or sea.]

Genius Resistless. An Ode. A Tribute to Jenner and Pasteur. By J. J. CALDWELL, M. D., Baltimore, Md. 12mo. Pp. 12. [Those fond of verse will appreciate this Ode.]

Eighteenth Report of the Trustees of the City Hospital, Boston, Mass., with Reports of the Superintendent and Professional Staff, Rules for Admissions, and Discharges, etc. 1881-2. 8vo. Pp. 90. [This appears to be a city document, as it is numbered 82—1882.] The Resident Physician and Superintendent is Dr. George H. M. Rowe. The pamphlet is filled up with statistics, official reports, etc.]

Editorial.

Chinese Habits.—In view of the fact that in one of our recent "selections" from *Good Health*, which gave a different view from that we had formerly entertained, we copy the following from a "local" in the *Evening Express*, of Los Angeles, California, of August 29th 1882, so as to further correct any erroneous opinion our readers may have formed from that "selection:"

"What a disgusting 'stink-hole' China-town is at present! Last evening a reporter of the *Express* strolled through the Chinese quarter with a couple of friends, and found it even more repulsive than he had ever seen it before. * * * * The most friendly criticism can only regard it as a disgusting embodiment of filth. The atmosphere is laden with a combination of sickening stench, and the cuddly holes into which the Chinamen are packed together like sardines in a box, are veneered over—walls, floor and ceiling—with stratified nastiness. How any people can consent to live as they do is one of the mysteries that is past finding out. Notwithstanding their daily friction with the decent observances of the white people, they remain wedded to their nauseating habits of life. As a result, it is a rare sight, indeed, to see a Chinaman who dwells in the city that is a specimen of rugged health. The fact is, these people are an excrescence—a fungus, a parasite, a sponge. They come here; accumulate all they can, keep all they get, and then leave with the few hundred dollars that will make them rich in their own land. Then follows another influx of Celestials, who go through the same routine, who then leave and make room for another 'gang.' And so it has continued. Congress has been forced into certain modifications of the treaty, which is something, but this is not assurance that it will not be repealed, if the Republicans should carry California at the approaching election. * * * Whatever may be the outcome of this question, it remains a fact that a Chinese element, here on the American continent, is a plague spot on our body politic, and it always will be non-assimilative and antagonistic to American civilization."

The National Board of Health was shamefully treated by the late Congress, as well as by the Assistant Secretary of the Treasury of the United States. The Board has always done its work faithfully and well, and has met with the general approval of the profession of the country who are best able to judge of its worth. The epidemic fund of the Board has been turned over to the Marine Hospital Department—thus leaving the Board dependent—as it were. Surgeon Ch. Smart, U. S. Army, and Secretary of the National Board of Health, has issued a circular letter, under date of October 4th, 1882, which makes an earnest appeal to the feelings of

humanity and for the good of the people at large, to induce every Congressman to restore to the Board its diverted funds. Let every doctor do what he can to help the cause.

The New York Polyclinic.—This new medical school for advanced students, and for members of the profession has been inaugurated with a most able faculty, and with a plan of instruction that happily meets a demand of the day. The advances in medical science have been so rapid within the past ten or fifteen years, that the Doctor whose diploma is fifteen years old will be found behind the times, unless he has been a close reader of the best medical journals. Indeed we believe that a vacation of several months spent in the Polyclinic or some institution of like high character should be a periodical duty of every intelligent physician. The Faculty of the Polyclinic embraces the names of many of the most eminent physicians in this country, and the plans of instruction are such as to meet the conveniences of practising physicians. Such a course of study as is proposed by this new school is absolutely essential to the highest success of the young graduate. We would call the attention of our readers to the advertisement of this medical School which appeared in the November number of the *Monthly*, or perhaps, what would be better, advise our readers to address Dr. Jno. A. Wyeth, No. 214, East 34 St. New York, for fuller information.

Samuel D. Gross, M. D., LL. D., of Philadelphia, has gone to Europe to spend the winter. On November 2nd., Drs. J. Marion and Harry M. Sims tendered him a dinner at Hotel Brunswick, New York city, which was largely attended, and many who were anxious to be present on such an occasion in acceptance of the invitation were prevented from attendance. The Editor returns his thanks for the honor of an invitation from Dr. Sims, and his regrets are many that he was unable to be present.

Over-Crowded Lunatic Asylums.—Dr. R. A. Wise, Superintendent of the Eastern Lunatic Asylum, (Va.) in his forthcoming report, very properly recommended the establishment of depots for the temporary care of lunatics who are now placed in jail. Dr. Wise thinks that the misery of lunatics in county jails might be greatly alleviated if, in outlying districts, four or five counties would unite in building a comfortable depot of reception for their insane near a railroad, where the agents from the asylums could reach them conveniently and cheaply. The insane, while waiting, would

then be enabled to get good medical treatment in all cases; and the expenses of their support in this way would be much less than in the jails. If these depots were generally adopted and properly located near towns, they could ultimately be used as asylums for the chronic insane and imbeciles, at county expense, and prove valuable adjuncts to our large insane asylums.

Dr. Oliver Wendell Holmes, it is said, is about to resign his Professorship in the Medical Department of Harvard University.

Dr. H. H. Levy, of this city, has been elected Professor of Physiology, etc., in the Medical College of Virginia by the *old* Board of Visitors. The selection is, in itself, a very good one. But whether the *new* Board will prefer him remains to be seen. He will, however, most probably, be allowed to remain until the close of the session of 1882-83. The Courts will soon take up this College matter, we presume.

Blakiston's Physicians' Visiting List for 1883 is ready. As this is the *thirty-second* year of patronage it has received, it is more than probable the "reviser" has studied the wants of this very valuable list, and we may add, he has supplied the want, by numerous additions that practitioners need in such a book. We make these remarks upon the copy received for 25 patients per week, with tuck, pockets and pencil, for \$1. per year. Like books or "Lists" for 100 patients weekly cost \$3.00; but this "List" is in *two* volumes.

Our Editorial Space is gladly surrendered in this number in order that we may better satisfy the wishes of our subscribers by giving fuller publications to articles on scientific subjects by original thinkers and experimenters. We regard ourselves as specially fortunate in being able this month to furnish such excellent contributions from authorities in different sections of this country.

Walsh's Physicians Combined Call Book and Tablet, Seventh Edition is now ready for distribution. It is published by Dr. Ralph Walsh, 332 C Street, Washington, D. C., and is mailed, prepaid, upon receipt of \$1.50—either by Post-Office Money Order or Registered Letter. If not convenient to remit by either of these methods, order through the nearest bookseller. It is an excellent "list," of good size, nicely

bound and suitably ruled and headed for the general practitioner. It contains, in addition, the usual *emergency* recommendations so as to refresh memory. It is the list that we have been using in our practice since the beginning of its publication. The pencil erasable "tablet" or slate on the first inside cover page, we have found most serviceable.

The Physician's Daily Pocket Record, published in Philadelphia, by the office of the *Medical and Surgical Reporter*, is so popular that we need do no more than announce its readiness for 1883. As the "Preface" announces, this edition has been entirely re-written, and "a variety of new matter introduced." It contains the usual posological table of former years, doses for hypodermic injections—especially the rare alkaloids; inhalations, means of administration, doses, etc.; suppositories, treatment of emergencies, etc. It is rare that a full examination of the urine has to be made in the presence of a patient—rarely, indeed, except to discover the presence of albumen. It would, therefore, be best if the nine pages on this subject were left out, and thus save bulk. While the "new remedies" department of four pages is by no means complete, it is still very serviceable, as it contains most of the new remedies *generally* used. The "list" itself is very good, and possesses the excellence of being "perpetual" for one living in this day. It has the usual obstetric calendar, a "perpetual almanac," a vaccination record, etc., pages for addresses, a record of deaths, etc. It is an excellent "list."

Pinus Canadensis.—This preparation of Messrs. Richardson & Co., of St. Louis, is meeting with great approval by eminent practitioners. Under recent date, Dr. Louis Bauer, Professor of Surgery College of Physicians and Surgeons, St. Louis, Mo., says that "the concentrated extract of *pinus Canadensis* has established for itself the most unqualified commendation as an astringent, and it scarcely requires any further affirmation on my part." Dr. Thomas F. Rumford, of St. Louis, says: "It is the only astringent I use in the throat. I consider it a very valuable preparation."

Mr. Harrison Phoebus, who has made the Hygeia the most popular seaside resort south of Long Branch, has also leased the White Sulphur Springs for a term of five years. This Saratoga of the South will doubtless, under the new management, become more famous and popular than ever before.

Obituary Record.

Dr. George French Carmichael died in Fredericksburg, of paralysis and general debility, on the 27th day of August, 1882, in the seventy-seventh year of his age. Dr. Carmichael was greatly esteemed and beloved in the community where he had practiced for more than fifty years. He was the impersonation of the Good Physician, dispensing its blessings to rich and poor, with unselfish devotion. He had a high sense of the honor and dignity of the profession, and a scorn for all tricks and shams. He possessed, in a large degree, the confidence of his patients, and his presence in the sick room had a rare charm. The qualities of his mind were solid rather than showy, reaching results by careful observation, and administering treatment with simplicity and directness. To qualities that enable the man and the physician, Dr. Carmichael added sincere Christian faith, and he departed this life with the humble assurance of acceptance by the Great Physician.

B. H. (M. D.)

Dr. H. B. Estill.—The severest blow that this community has experienced in many years was when death struck down Dr. H. B. Estill. A young man of extraordinary promise and talents of the first order, during his brief career as physician and surgeon, brilliant success attended him. Particularly in the department of surgery he stepped at once to the front. Some of the most difficult cases known to the profession he was called upon to treat, and in every instance his operations were crowned with success. In his untiring devotion to his patients when that terrible scourge—typhoid fever—was raging in our midst, may be attributed the great loss this community was called upon to bear, and it was a sad blow to his parents and friends. Overtasked energies of muscle and brain succumbed to the fell destroyer, and the fatal fever claimed him as a victim. A man of sterling worth, brilliant prospects, and ardently devoted to his noble profession, in God's inscrutable Providence was called away; but his name will live, and his memory be cherished for aye in the hearts of our people.

I.

Tazewell C. H., Va., Nov. 22, 1882.

Dr. Preston Roan, of Winston, N. C., died on Nov. 8 at his residence in that city.

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Original Communications.

ART. I.—**Alcohol: Its Use and Effects as a Beverage and Medicine.*** By J. F. WINN, M. D., Richmond, Va.

Thirty years ago, the true physiological action of alcohol was merely speculative and contradictory; to-day, acknowledged facts supplant disputed theories. One evidence of the advance made in this particular direction, is the great number of *Journals of Inebriety*, both in our own country and abroad.

Conflicting views on the use of stimulants in *disease* existed long previous to the temperance reform. The Roman and Greek physicians used wine sparingly. Even doctors of the middle age were cautious in the administration of such agents; and so late as the eleventh century, when they were acquainted with ardent spirits, they did not employ this agent in disease. Later, Stahle's announcement of his phlogistic theory of disease resulted, for the most part, in the total rejection of stimulants by many eminent physicians of that day. Next the celebrated John Benson Brown attempted to establish a system of medicine characterized

* This paper was offered for the Ex-President's Medical Prize of the Medical Society of Virginia, during the session, September 13 15, 1882. It was complimented by receiving only one vote less than the essay on the same subject to which the prize was awarded. By vote of the Committee on Publications, Dr. Winn was permitted to publish the paper in some regular medical journal of his selection. We thank him for contributing it to the *Monthly*.

solely by the administration of stimulants and narcotics. Disease, with him, was always "loss of vital power," and the cure was found in free and unrestricted stimulation.

Brown's theory was promulgated, with modifications incident to the advance of medicine in general, until the beginning of the present century, when a compromise was arrived at, resulting in the general rule that *in all phlogistic disease, the remedies should be depressing and anti-phlogistic*; but when the phlogistic attack was controlled by phlebotomy, tartar emetic and purgatives, *stimulants should be given to restore health*.

About this time, Dr. Todd, appreciating the evil of the anti-phlogistic system, pronounced "*all disease depression of itself*," and therefore *required it to be treated boldly from the beginning with stimulants*.

But since the time of Todd and his school, the general sentiment of the profession has been that stimulants are only of *temporary* value in disease, and are capable of inflicting positive harm to those in health. The old anti-phlogistic idea has long since exploded and Brunonianism is fast following.

Chemical experience and physiological investigation show that the profession is awakening to the more cautious prescribing of alcoholic stimulants. The following is a resolution adopted by the American Medical Association in 1878, and re-affirmed at its meeting in St. Paul, in June, 1882:

Resolved, "That in view of the alarming prevalence and ill effects of intemperance, with which none are so familiar as members of the medical profession, and which have called forth from eminent practitioners the voice of warning to the people of Great Britain, concerning the use of alcoholic beverages, we, the undersigned members of the medical profession of the United States, unite in the declaration that we believe alcohol should be classed with other powerful drugs; that when prescribed, it should be done with conscientious caution and a sense of great responsibility.

Resolved, That we are of the opinion that the use of alcoholic liquors as a beverage is productive of a large amount

of physical and mental disease; that it entails diseased appetites and enfeebled constitutions upon offspring, and that it is a cause of a large percentage of the crime and pauperism of our cities and country.

Resolved, That we would welcome any change in public sentiment that would confine the use of intoxicating liquors to the uses of science, art and medicine."

For more than a quarter of a century, the labors of physiologists have been directed to finding out the true physiological effects of alcohol on the human system; but I could not in the limits of this paper give even a *resumé* of all that has been said on this subject.

First, let us consider the use of alcohol as a *beverage*. The United States Commissioner of Internal Revenue, in his report of 1869 says, in brief, that the annual consumption of alcoholic liquors is not less than *eighty million gallons*. This statement is borne out by the Census report for 1860, which makes the annual production of domestic wines 90,413,581 gallons. We may safely conclude that the amount used, as a beverage, is not less than the taxable amount reported by the Internal Revenue Department in 1870, viz: 72,425,353 gallons. If the objection be raised that a large proportion of this is used in arts or exported, it will be seen that the number of gallons assumed to be correct, is below the Commissioner's estimate, not taking into account the quantity made by illicit distiller, the smuggled imported liquors, the domestic wines from grapes, etc., for private use. Dr. Young, Chief of Bureau of Statistics, estimates the annual consumption of alcoholic beverages, including *malt* liquors, in 1867, to be about 221,200,000 gallons, and the cost about \$600,000,000!! Dr. Hargreaves, in his valuable book, entitled "Our Wasted Resources," more than confirms the foregoing by the statement that the people of the United States spend, in the period of eleven years, for spirituous liquors, more than the entire value of their *agricultural*, *mechanical* and *manufacturing* products. To confine ourselves to the statistics of our own State, it is estimated that the annual consumption of alcoholic beverages amount to the enormous sum of \$17,000,000. Need we be surprised at panics and hard times?

I now pass to the consideration of its *effects* as a *beverage*. I shall endeavor to present a summary of the conclusions touching alcohol in its relation to the following points:—its *primary physiological action*, its *food value*, and the *structural changes resulting from its long continued use*.

PRIMARY ACTION OF ALCOHOL.—Dr. B. W. Richardson, F. R. S., * has found that alcohol, taken into the stomach, passes rapidly into the blood (unchanged, by endosmosis partly) and attacks the *red* corpuscles, destroying their form by the abstraction of water, causing them to lose their smooth and regular outline, making them irregular or crenate, or even star-like; or it may cause them to adhere in rolls, or they may assume an oval or truncated form—thus impairing the ease with which they pass through the vessels of the lungs and the general circulation. All these changes being due to the affinity of alcohol for the water of these bodies, it thus interferes with the function to absorb and fix gases.

Professor Schultz states † “that alcohol stimulates the blood-discs to an increased and unnatural contraction, which hurries them on to the last stage of development—inducing their premature decay and death. The coloring matter is dissolved out of them and they lose their vitality.”

“This loss of vitality manifests itself by the formation of oil in the discs (an observation confirmed by Lallemand) and then, by their conversion into round, pale globules, which in all cases of disease—i. e., of diminished vitality—are found in excess in the blood. This devitalized condition of the nutritive fluid is probably the first step to the devitalization of the tissues which it feeds.”‡ The experiments of Böcker and Virchow concur in proving the action of alcohol in arresting the development, as well as hastening the decay of red globules.

With regard to the *fibrine*, its influence is two-fold, depending on the degree in which it affects the water holding the fibrine in solution. It may fix the water with the fibrine,

* “Cantor Lectures” before the Edinburgh Society of Arts.

† Physiological action of Alcohol.—H. Munroe, M. D., F. L. S.

‡ *Op cit.*

thus preventing co-agulation. Thus is the fact explained that, "in acute alcoholic poisoning, the blood is often found quite fluid, and again firmly co-agulated." * By numerous experiments, it has been proved that the well-known *flush*, which supervenes upon the use of alcohol, is caused by *paralysis of the blood-vessels*, through its action on the vasomotor "nervous chain." As a result of this loss of tension on the walls of the blood-vessels, *congestion*, not only of the periphery, but of the brain, spinal cord, stomach, liver, kidneys and all the vascular organs, sets in. The heart's action is increased, less resistance is offered, and in due time the way is paved to *hypertrophy*.

Dr. Parkes and Count Wollowicz have recorded very valuable deductions from their experiments concerning alcohol on the heart's work. Without giving the details of experiment, suffice it to say, that they first determined the amount of work done by the heart without alcohol, which equivalent is 116 foot tons in 24 hours. The increase of work induced by alcohol is one-eighth part for four ounces; one-sixth part for six ounces and one-fourth part for eight ounces.

This period of congestion alluded to constitutes the *first* stage of the physiological action of alcohol, soon to be followed by the *second condition*—chiefly characterized by its effects on the spinal cord in the loss of coördination of the muscles and their inherent contractile power—notably observed in the extensor group.

About the termination of this stage, there is usually observed, in young subjects, vomiting, followed by a temporary relief.

Following its action still further, we now come to the *third stage*. Here the cerebral centers are involved, manifested by loss of will-power and judgment. "Chaos has full sway, and the animal and sensual instincts are laid atrociously bare."

This is soon to be followed by the *fourth* and last stage, as shown by *coma*. The pulse generally subsides along with the nervous excitement; and though slow, it is often full—

* Richardson.

such as is seen in compression of the brain. As Dr. Richardson has aptly expressed it: "The body lies a mere log, dead all but one fourth, on which alone its life hangs; the heart still remains true to its duty, and while it just lives, it feeds the breathing power, until the poison passes away, and the unfortunate lives to die another day.

Thus we have seen that the acute or primary effects of alcoholism are—

1. Congestion, from want of vaso-motor nervous control.
2. Loss of muscular control.
3. Perversion of judgment and will power.
4. Absolute prostration of nerve power.*

Having reviewed briefly the primary physiological effects of alcohol, let us next examine the evidence bearing upon its *food value*. All food may, for convenience, be divisible into two classes—tissue builders and heat or force producers. The essential element in the former is nitrogen, while the latter is composed chiefly of hydro-carbons, which readily oxidize and give force for the animal economy. More recently the nitrogenous foods are found to be, in a certain degree, heat-producers, but for our purpose this need not be dwelt upon. Alcohol contains no nitrogen, therefore has no claim as a tissue-forming food; nor is it capable of transformation into the nitrogenous principles.

The idea that alcohol, because of its composition, being rich in carbon and chemically closely related to the hydro-carbons, must be, in some way, a heat-producer, and consequently a force-producer, has elicited many theories and experiments. The question is: "Does alcohol undergo any change when in the blood? If so, what is it?" Many gifted minds have endeavored to solve this problem, but as yet we are not in possession of an *exact* answer. The well-known fact that a glow is experienced soon after alcohol is taken, afforded reason for the belief of the early physiologists, that it is consumed with the evolution of heat, and alcohol for a time was thought to be the great calorifacient.

This was the status of the question prior to the year 1860,

* Richardson.

when M. M. Lallemand, Perrin and Duroy * instituted a research, the conclusion from which was that alcohol, taken into the living body, accumulates in the tissues, principally in the liver and brain, and that it is eliminated by the fluid excretions, particularly by the renal, *as alcohol*. They sought for the secondary products, aldehyde and acetic acid, but found none, except a little acetic acid in the stomach. This announcement from these enquirers was accepted by scientists and the public, for a time, as the true explanation, until Duprè † reported, as the result of his experiments, that "the amount of alcohol eliminated per day does not increase with the continuance of the use of alcohol, therefore it must somehow be destroyed in the system." It was not long, however, before there came expressions of doubt concerning the operations before announced, from the celebrated Anstie, who was sustained by Schulinus, Thudicum and Duprè. They asserted as a result of experiments that while alcohol is eliminated by the emunctories of the body, the quantity so eliminated is the *merest fraction of that ingested* and that there must be *some other* means by which the agent is disposed of in the body. In the last researches conducted by Anstie ‡ (assisted by Duprè) this conclusion was arrived at: "That quite 600 grains of absolute alcohol can be disposed of daily within the organism of an adult male, without any perceptible injurious effects upon the bodily functions."

We must conclude from the evidence, that a part, at least, of alcohol is decomposed; whether by oxidation into carbonic acid and water or into secondary products, remains to be shown. It is known that alcohol will burn outside the body with the usual resultants, carbonic acid and water. Now, seeing that a greater part is lost in the body, if it can be established that the same combustion occurs inside as outside the body, then alcohol must be a heat-producer; and if so, produce the means of potential energy.

What effect does alcohol have on animal temperament?

* Du Role l'Alcool, et des Anesthetiques dans l'Organisme, Recherches Experimentales, Paris, 1860.

† In a paper read before the Royal Society of London.

‡ Final Experiments on the Elimination of Alcohol in "Practitioner," July, 1874.

Prior to the year 1864, no definite answer could be given to this question. The thermometer was not then in such general use as a few years later. Drs. Carpenter, * Lees and some others had asserted from the observation of Arctic navigators, that the temperature was *reduced* by alcohol, though they had not resorted to direct experiment for proof. Then it was that Dr. Richardson commenced his careful research, extending over a period of three years, for direct "interrogation of nature." The result of these experiments may be briefly epitomized as follows: † In the first stage of alcoholism (that of relaxation and injection of the blood-vessels) there is a *rise* of *external* temperature of from one-half to one and a half degree F.; but this effect is brief and is similar to the reaction from a cold bath, ‡ when from the unfolding of a greater sheet of warm blood there is a more rapid radiation of heat from the increased surface. During this stage, there is, however, a *decline* of the *internal* temperature; the expired air shows a diminution in the amount of carbonic acid, while the congested surface being so much below *par* in tonicity, that cold increases, rather than diminishes, the suffusion. It was this condition which gave rise to the belief that alcohol warms the body. In the second stage (muscular perturbation) the temperature first falls to the normal standard, then to about one-fourth of one degree below health. This may last for two or three hours even when the supply of alcohol is stopped. As the inebriate passes into the third stage (perverted will-power) the temperature falls at a rapid rate; and, as the fourth stage is reached, it declines to a point that is positively alarming—usually from $2\frac{1}{2}$ to 3, and in some extreme cases, || as much as 8° F. This fall of temperature continues so long as the coma lasts, and this fact is of considerable diagnostic value; the coma of apoplexy being attended with an increase of temperature.§

As there is a reduction of temperature, so there is a corre-

* Cantor Lectures p. 111.

† *Op. cit.* p. p. 113 and 114.

‡ Prof. Wm. Thompson in *Medical Times*, October, 1878.

|| Alcohol and Science, p. 149.

§ Cantor Lectures, p. 114.

sponding reduction in the amount of the natural products of oxidation, as before stated, of carbonic acid, which in extreme intoxication, has been found to be reduced to one-third below the normal standard. *

From the evidence before us, the conclusion is that alcohol is decomposed *in some way* in the organism, but not "burnt off" after the usual manner of combustion; for we have seen that the ordinary product (carbonic acid) is diminished, and that the animal heat is not only sustained, but on the contrary, greatly lowered. Hence the main proof of the force value of the hydro-carbons does not obtain in alcohol.

What effect has alcohol on tissue change? Professor Moleschott was the first to announce that if alcohol was not oxidized as the hydro-carbons, *it prevented the oxidation of tissues*, and therefore was an *indirect* food. Claim for an agent a food or force value when it has the power of retarding retrogressive tissue metamorphosis, upon which the laws of assimilation and nutrition depend! If this "destructive assimilation" be physiological; if vital power is dependent upon a process of reparation and decay; and if, according to Dalton, a retardation of this physiological process is productive of disease, is it not illogical, at least, to ascribe to an agent, one of the effects of which is, as claimed above, the office of a food in *any* sense? "To take an agent which is not known to be in any sense an originator of vital force; which is not known to have any of the usual power of foods, and use it on the double assumption that it delays metamorphosis of tissue, and that such delay is conservative of health, is to pass outside of the bounds of science into the land of remote possibilities." † That alcohol *does* retard tissue metamorphosis, admits of little doubt; indeed, the verdict of most investigators now is, that in this retardation is found the explanation of its anti-pyretic power. Dr. Grebe ‡ has recently confirmed this statement and announces that in fever "the red corpuscles are diminished in

* Richardson's Cantor Lectures, p. 116.

† Dr. E. M. Hunt in a paper read before the International Medical Congress.

‡ As quoted in the *Medical Record*, August 5, 1882.

number, but after giving alcohol in anti-pyretic doses they reach their normal amount again." (This assertion was first made by Manassein.)

What then is the explanation given for the decomposition of alcohol. Richardson * is led to believe that there is a certain degree of saturation of the blood with alcohol, in the limits of which all the alcohol is disposed of by its decomposition. Beyond that point the process is arrested, and then there is an accumulation of alcohol, with avoidance of it, unchanged in the excretions.

Secondly, the decomposition of alcohol is not into carbonic acid and water, but into secondary products, *aldehyde* and *acetic acid*, at the expense of the oxygen, which ought to be applied for the natural heating of the body. "Pure diluted alcohol is not oxidized by exposure to air, but in the presence of fermentative or vegetable matter undergoing decay or change, it is oxidized first to aldehyde and then this rapidly absorbs oxygen and yields acetic acid."† The composition of alcohol is C_2H_6O ; that of aldehyde is C_2H_4O , or it is alcohol deprived of two atoms of hydrogen.

Now, if Richardson's theory be correct, the change of alcohol in the body is this: Two atoms of hydrogen combine with one of oxygen (which atom of oxygen should be appropriated to the oxidation of tissues), and thus water is the resultant. The aldehyde C_2H_4O now appropriates to itself another atom of oxygen, which, like its fellow, should have served the purpose of tissue oxidation, and the result is acetic acid with the formula $C_2H_4O_2$.

Notwithstanding the views expressed by Dr. Hammond, ‡ "that a man should take a glass or two of wine at dinner, to lessen the *wear* and *tear* of his mind and body," it must be conceded that alcohol has no claim as a food, but, on the other hand, is an agent fraught with the most disastrous consequences, as will be further seen in the consideration of its—

SECONDARY PHYSIOLOGICAL ACTION. These effects are mani-

* Cantor Lectures.

† Atfield's Chemistry, p. 375.

‡ Address before the New York Neurological Society, May 4th, 1874.

fested in those persons *long* addicted to the use of the intoxicating agent. We have seen that its primary effects are exhibited in *four* distinct periods, each characterized by distinct phenomena. As in the *acute*, so in the *chronic* inebriation, these effects are referable to four stages, each differing from the other. Many persons escape these injuries because they daily imbibe so small a quantity that the system disposes of it without detriment, as has been shown by Anstie and referred to in a former part of this paper. A vast majority, however, do not escape the evils of drink. It is known that thirty-three and one-third per cent. of all the deaths in New York city are occasioned directly or indirectly by the use of alcoholic drinks, and that 130,000 persons have died in that city during the last 38 years from that cause.*

The first degree of the secondary action of alcohol involves those phenomena characterized by *mechanical* effects, due to the continuance of that arterial relaxation caused by the daily use of just enough alcohol to be denominated *moderate* drinking, probably from four to six ounces. The heart laboring under the successive stimulation of the agent is forced to do increased work (Parke's and Wollowicz's experiment on the heart's work); and when the exhilarating pleasure begins to pass away, "the system, like a tired horse, begins to flag, and the man has to apply the whip."

This state of things may continue without appreciable detriment until the age of 25 or 30 (if commenced in youth) when the vital capacity has been expended in the full development of the body. It is now that the mechanical effects begin to show themselves for the most part in *hypertrophy* of the heart, with its usual attendants.

Co-existent with the lesions in the organs of circulation there is set up the initial *sclerosis* of the colloidal matter entering into the structure of the various parts of the system, producing all those structural deteriorations in the *stomach, brain, liver, kidneys, etc.*, to be noticed further on; the incipency of which is generally announced by that characteristic *alcoholic dyspepsia*, with its train of nervous

* Dr. Parker, in a public address.

derangements, in the form of visual and aural disturbances, neuralgia, insomnia, etc.

We have examined the deleterious effects on the blood, and are told that the *meninges* and *nervous* matter, as well as the *interstitial connective* tissue, found in every part of the body, all fall victims to its ravages. All authorities agree that that organ which is most liable to structural change is the

Liver, under the form of *Cirrhosis* (sclerosis by some writers), *Fibroid* or *Indurated Liver*, *Gin* or *Whiskey* liver, as known by British writers, and by others, *Hob-nailed*; this latter name being applicable to the late stages of the disease, due to contraction of the adventitious connective tissue, at which time dropsical effusions make their appearance.

The explanation most generally received as to the action of alcohol in producing this degeneration is, "that passing readily, into the portal blood, from the stomach and carried at once to the liver, it excites constant inflammation of a low grade in the interlobular spaces, and hence the production of adventitious tissue." (Flint's Practice, p. 561.)

Theirfelder, that able contributor to Ziemssen's *Cyclopedia*, in referring to the etiology of this disease, places the habitual use of alcoholic spirits first in the list, and adds that "according to P. Olivier, this forms indeed the sole well-established cause."

The liver is not exempt from *fatty degeneration*. "Because the carbonaceous elements of the blood and tissues do not become oxidated as rapidly as when the alcohol is not present, they accumulate in the form of *fat*.*" Dr. Davis is sustained by Schueppell, who states "that this form of hepatic disease is frequently met with among habitual drinkers, especially where the actual dyscrasia of inebriety exists; is often associated with Cirrhosis, and that in view of the *lipaemia* which is present at the same time, the fatty liver of hard drinkers may certainly be regarded as *fatty infiltration* * * * * and we shall have to consider the wealth of fat in the blood, not so much as being the expression of

* Nature of Inebriation.—Dr. N. S. Davis.

increased fat production as it is of incomplete fat combustion."*

With regard to hyperæmia and hepatic abscess, climate seems to have a determining influence. "Among the Mohammedan population of Egypt this disease is of extremely rare occurrence, and it is then shown to appear in individuals who, according to their own admission, have previously indulged in alcoholic liquors. Of the 36 cases of non-Mohammedan population of Cairo, 34 were men who drank brandy or wine. Cirrhosis is of extremely rare occurrence in Cairo, while inflammations are frequent. This is explained by the theory that alcohol, which gives rise in Europe to *chronic interstitial hepatitis*, induces in like manner in warm climates (where all vegetable processes run a more rapid and active course), *acute purulent inflammation* of the liver."†

The Kidney, in like manner, suffers from *fatty* degenerations and *Cirrhotic* changes; but as to the special causative influence of the abuse of alcohol in the production of these lesions, the profession is divided in opinion. Goodfellow so far believes in the causative influence of liquors in the production of Cirrhosis of the Kidney as to give it the name *Spirit Kidney*. Dickinson is firmly of the opinion from his investigations that the abuse of alcohol favors the development of Cirrhosis of this organ. On the other hand, Bartels ‡ is adverse to the opinions of Goodfellow and Dickinson, but is candid enough to say "that, British experience, should it be different, may, perhaps, arise from the fact that alcohol is taken in more concentrated form there than it is in this country (Germany), and is more frequently mixed with Juniper oil (gin). Substances that stimulate the kidneys must, if taken in excess, induce pathological changes." Flint,§ on the other hand, in an analysis of 102 cases, reports 38 as using alcoholic beverages—18 of these drank sparingly; 13 were spirit drinkers and intemperate; 3 were moderate drinkers, and 4 drank malt liquors freely. His conclusions certainly do not show

* Ziemssen, Vol IX.

† *Op cit.* p. 113. A foot-note by Sachs.

‡ Zeimssen's Cyclopedia, Vol. XV, p. 412.

§ Practice of Medicine, p. 825.

any special causative influence relating to the use of alcoholics. It is not improbable that the use of alcoholic beverages contributes to the etiology of the disease in some cases, but the statement that it exerts a direct agency in *all* cases has not been sustained by clinical experience; neither is there in this country warrant for the term *Spirit-Kidney*.*

The Lungs. Besides the congestions partly due to acute intoxication, together with exposure while in a debauch, we have to deal with a more serious and intractable form of lung lesions, caused by the long continued action of alcohol in the production of that fatal form of consumption known as *fibroid alcoholic Phthisis*. The changes here met with are analagous to those found in the liver, kidneys and other organs.

Richardson has observed in the analysis of 2,000 hospital patients, that *two per cent.* were traceable directly to the influence of alcohol—the average age of those attacked being about 48. Not inconsistent with the foregoing is Dr. L. D. Mason's report,† that in 33 cases of Phthisis “a fair proportion were produced by the long continued action of alcohol on lung tissue.”

Dr. Richardson, in his admirable account of the disease,‡ dwells upon one distinctive feature as compared with the ordinary form of Phthisis. It is the countenance of the alcoholic consumptive. “He does not present the *facies alcoholica*—the blotched skin, the red nose, the dull protruding eye and vacant stare of the confirmed sot; neither the wan, pale, sunken cheek of the victim of ordinary consumption; but his face is the best part of him. When his muscles have lost their power, he is of fair proportion in the face; he has little pallor, and is expressive in feature, so that his friends are apt to be deceived, and to believe there must be hope for his recovery when, indeed, he is beyond every hope.”

Nervous Lesions. Last, but not least in importance, are the deleterious effects exerted upon the brain and spinal

* Dickinson in British and Foreign Medical Chir. Review, January, 1867.

† President's Report of Inebriates' Home, Ft. Hamilton, N. Y., 1882.

‡‡ Cantor Lectures, p. 162.

cord. As a result of redundant production of interstitial tissues the nerve element and the delicate capillaries are encroached upon or entirely destroyed; atrophy of nerve matter occurs either on account of disturbance with its nutrition or because of the pressure exerted by this hypertrophied connective tissue. Contraction, sooner or later takes place in this adventitious growth, which cuts off the blood supply, and hence the lack of nutritive material for the nerve element. This resulting, anaemia is the initial step to those pigmentary, earthy or calcareous degenerations referred to by Dr. Maudsley.* But in addition to these degenerations in the general nerve tissue, there exists in the brain a special class of nerves—the “*fibres of association*,” which often fall victims to the toxic influence of alcohol. Meynert† ascribed to these fibres the office of connecting adjacent, as well as distant, portions of the cortical substance with each other.

Maudsley says, || “The habitual co-ordination of thoughts and feelings is the basis of consciousness and personal identity,” and “when the co-ordination function in the brain is overthrown, the consciousness of personal identity and responsibility are also destroyed.” Thus in chronic alcoholism the intrusion of this interstitial connective tissue disturbs the equilibrium of nerve association; personal identity and responsibility are lost and the unfortunate becomes the victim of *Alcoholic dementia* (of Marcet). The early signs of this disease may be summed up in loss of memory, that is, of *associating* power, failure of speech, and various manifestations of moral obliquity. In these premonitory symptoms we find the analogue of the second and third stages of *acute* alcoholism.

There are other manifestations of alcoholism, however, which may make their appearance before the development of that dementia alluded to. They may exhibit themselves in acute mania of a few days duration, known as *delirium tremens*; or in a more *prolonged* condition, viz: *mania a*

*Pathology of mind, pages 511 and 512.

† Spitzka, Journal of Nerve and Mental Diseases, January, 1881.

|| *Op. cit.*, p. p. 373—483.

potu, lasting, it may be, six or eight weeks, and characterized by the same sort of delusions as are noticeable in the former—suspicion, alarm, persecution and such like hallucinations, together with persistent insomnia. Medical psychologists recognize yet another form—"Mania of *Suspicion*," the symptoms of which are sufficiently indicated by the name.

The abuse of alcohol is now recognized as among the most prominent causes of—

Insanity. That this should be the verdict of authority is not surprising, when we reflect upon the destructive action of alcohol on the cerebral tissue. The difficulty of obtaining correct data concerning the "supposed causes" of cases in the various asylums is patent to all, for in examining any report of an insane institute we find put down as *causes*—"ill-health," "reverse of fortune," "loss of friends," etc, which, if carefully scrutinized, would, in many instances, reveal the fact that the supposed causes alluded to were merely the *exciting*, while intemperance was the prime factor in its production. M. Lunier reports that during the late Franco-German war, 55 *per cent.* of the admissions were due to alcohol alone. This high rate is perhaps due to the large consumption of a cordial in France known as *Absinthe*. It is said to be prepared by mixing five drachms of the volatile oil of wormwood with 100 quarts of alcohol. M. E. Descaine * has satisfied himself that the injurious effects of alcohol are greatly intensified by the use of this cordial—intoxication being more rapidly produced; the pneumonia belonging to chronic alcoholism more quickly developed, and the effects on the nervous system more marked. Dr. Kirkbride, in his report for 1871, says: "that of 3,599 patients admitted 13.42 *per cent.* had become insane through drink.

Dr. Marcell, of France, † has described a form of insanity arising from the abuse of alcohol, marked by peculiar symptoms; since reading a description of which, I am convinced that a patient of mine, in the fall of 1877, and now

* "Annales Médico-psychologiques," for 1872.

† Quoted by Dr. W. Nasse, in *Quarterly Journal of Inebriety*, July, 1882.

in the Western Lunatic Asylum at Staunton, Virginia, was a victim to the disease reported by him. I hope I may be excused for relating the case in detail.

G. W. H. —, age, 42; accountant by profession; married; the father of 6 children; intelligent and energetic, with no hereditary taint of insanity. Had been a free drinker from youth. Had had two attacks of delirium tremens—the last having occurred two years before becoming my patient. For a number of years he had suffered from frequent and severe paroxysms, supposed by him to be “nervous headache,” for the relief of which he had resorted to the various nostrums of the day, notably “R. R. Relief.” On October 27th he attended a balloon ascension, and returning home, talked incessantly about balloons, and *suddenly* imagined that this ascension was that of our Lord. At the same time his wife and friends noticed a suspicious manner towards, and distrust of, even the members of his own family; he imagined his wife was trying to poison him. The next prominent symptom was, belief that he was God, holding imagined consultations with the other members of the Trinity. Read his Bible constantly, and preached to imagined audiences. Wrote his brother, who lived in another part of the State, to assist him in the establishment of the *New Jerusalem*. He expected him to come in the moon. Heard voices of enemies outside plotting to kill him. Exhibited homicidal tendencies which became so violent as to require the use of a “Straight Jacket.” These symptoms of acute mania continued for two weeks, during which time he had not slept 48 hours, notwithstanding the vigorous use of the most powerful hypnotics. About as suddenly as the disease appeared, he became extremely taciturn, morose and melancholy. Was taken to the Asylum; continued in this condition for several weeks, when hopeless dementia exhibited itself, and was persistent when I last heard of him.

Thus far we have considered the effects of alcohol on the organism of the individual addicted to its use. Let us now examine its influence on the

Offspring of the Inebriate. That the progeny of alcoholics are peculiarly liable to degeneration of the nervous system, all will agree. Aristotle recognized this when he said: “A drunken woman brings forth children like unto herself.” But we need not go so far back for evidence of its hereditary effects. Professor Willard Parker, an eminent

authority and pioneer in the study of this subject, says: "A *tendency* to this disease of the parent is indeed as strong, if not stronger, than that of consumption, cancer or gout. The tendency referred to has its origin in the *nervous* system." Says Dr. A. Mitchell †: "I think it quite certain that the children of habitual drunkards are, in a large proportion, idiotic and, in a larger proportion, themselves drunkards, than other children. Many habitual drunkards are also predisposed to insanity. What they transmit to their children is *really that predisposition which they have themselves*." By reference to the report for 1882 of the President of the Inebriates' Home, Fort Hamilton, New York, it will be seen that in an analysis of 600 cases, the record shows an inebriate father in 209 of the number. While idiocy, epilepsy and insanity may be developed in the child of an inebriate parent, yet the inheritance most likely to be entailed, is that insatiable craving for alcohol, known as

Dipsomania. Dr. Yellowlees believes ‡ that this condition rarely results from intemperate habits, but is nearly always the development of a baneful heritage. || Dr. Hargreaves says of dipsomania, that it assumes three forms—the *Acute*, *Periodic* and *Continuous*. (1) In the *Acute form*, the person formerly sober, suddenly commences to drink to excess, and soon becomes careless and indifferent to all claims of business or family. (2) The *Periodic form* is mostly connected with some hereditary taint of insanity, intemperance or injury of the head. * * * * From alternate periods of sobriety and drunkenness, unless they are checked, he falls a victim to the physical effects of intemperance, becomes a maniac or an imbecile, or may run into the next form of the disease. (3) The *Continuous form* is the most common, usually presenting the active form of moral insanity. Without drink, he is morose, fretful, weak, tremulous and incapable in mind and body; with it he recovers a certain degree of strength, and feels comparatively comfortable;

* See proceedings of American Medical Association, 1871.

† See report of Committee on Habitual Drunkards, (House of Commons,) 1872.

‡ "Insanity and Intemperance," by D. Yellowlees, M. D., *British Medical Journal*, October, 1873.

|| *Alcohol and Science*, p. 273.

continuing the indulgence to excess, thus alternating intoxication and sobriety until death or imbecility finally overtakes him.

USE AND EFFECTS OF ALCOHOL AS A MEDICINE.—Says Lionel Beale, "There is no more important question in medicine to be determined than the action of alcohol in disease." Such is the opinion of most practitioners, since we are met with so many conflicting statements concerning the behavior of alcohol in the system. "When a remedy is on trial" and equally efficient substitutes are claimed by many, it behooves us to weigh well the evidence, *pro* and *con*, and at least prescribe it "with caution and a sense of great responsibility." When indisputed authorities agree that it is not a food specially productive of force and endurance; that it is not a sustainer, but on the contrary, is a powerful and direct depressor of animal temperature, "its field of therapeutical application is so narrowed that it can hardly be called more than

A General Stimulant. No one would resort to alcohol for its narcotic effects while there are so many well defined sedatives and anæsthetics within our reach. Richardson has explained conclusively how alcoholic stimulation is affected. It is not a *direct* stimulant to the cardiac muscles, but it acts *indirectly* through its paralysing influence of that "organic nervous chain" which supplies the blood-vessels. As a result of this relaxation the heart beats with "increased frequency," but "with a weakened recoil stroke." Parkes confirms the researches of Richardson, and shows that the heart soon loses power by this quickened movement. He says: "In the exhaustion following great fatigue, alcohol may be useful or hurtful, according to circumstances. If exertion must be resumed at the expense of the heart's nutrition, then it may be used, but only in small amounts, and with Liebig's extract of meat. When renewed exertion is not necessary, let rest recruit the body." Richardson,* in alluding to the change that has come over the medical world of late years respecting the value of alcohol as a remedy, states "that alcoholic stimulation was the first

* *London Lancet*, January, 1876.

point of practice in the treatment of acute hemorrhage; was a lesson of all others most impressed on my student life. Gradually I began to discover that alcohol was clearly objectionable as a remedy for *hemorrhage*. To push alcohol so as to produce vascular tension (contraction of blood-vessels), was, I found, to push an agent which *relaxed* the vessels and let them more easily give forth their blood. I have substituted *warm* milk for alcohol in every case of hemorrhage I have been called to treat, and I am satisfied that the new treatment is safest and soundest." Such treatment is consistent with the generally accepted views as to the action of alcohol. What is desired in every case of severe hemorrhage is an additional supply of healthy blood to take the place of that which has been lost; rather than, by the effects of alcohol, send what may be left, "galloping over the body."

A great deal has been written on the *antipyretic* action of alcohol, and notwithstanding it possesses this property, yet in the minds of some, it has not received as wide a range of application, neither is it destined to supplant other antipyretics, the unquestionable value of which there is more unanimity of opinion. Dr. W. C. Dabney, a physician of acknowledged ability and an earnest searcher after truth, in his able article entitled "Nature and Treatment of Fever,"* concludes, "that as a *simple* antipyretic, when the object is to reduce temperature only, it is very inefficient, and should always be given along with other antipyretic agents." He states further, "that the class of cases in which we should judge from its physiological action, and in which clinical experience also shows it to be most beneficial, are those in which the heart's action is weak and rapid, the skin and tongue being at the same time dry and harsh. It is specially indicated when, along with the high temperature, there is rapid wasting and an inability to take and retain nourishment in sufficient quantity. As an adjuvant to other remedies, it is applicable to a very large class of cases of hyperpyrexia," and, on the authority of Binz, "there are certain diseases—for instance, traumatic erysipelas and puerperal

* *Virginia Medical Monthly*, December, 1878.

peritonitis—in which even large doses of quinine may completely fail, while alcohol induces a distinct fall of temperature.” Binz has found that in the hectic fever of phthisis, the temperature is somewhat lowered by it, and the patients pass better nights and perspire less profusely. Dr. Dabney goes on to say, “If the heart’s action, however, be full and strong, the cheeks flushed and patient complains of headache, it should be given with great caution, or withheld altogether. Delirium is not always a contraindication to its use; indeed, it is often highly serviceable in such cases. In cases where the liver or kidneys are congested or inflamed, it should be given with extreme caution. As to the dose, the best guide is the effect produced. As a rule, from two to four ounces of alcohol, or four to eight ounces of brandy in the twenty-four hours will be sufficient.”

Sir William Jenner,* in treatment of *typhoid* fever, sums up his experience with the use of alcohol in the following: “Its influence is exerted *primarily* on the *nervous* system, and through it on the several organs and processes, for example, the heart and the general nutritive processes—changes on which the rise and fall of temperature depend. In judiciously selected cases, it lowers the temperature, increases the force and diminishes the frequency of the heart’s beats; it calms and soothes the patient, diminishes the tremor, quiets the delirium and induces sleep. It should never be given in the early stage of the disease, or with the hope of anticipating and so preventing the occurrence of prostration and debility, but should be prescribed only when the severity of special symptoms, or the general state of prostration, indicate its use. It should not be prescribed when a sudden gush of blood has induced faintness, unless the faintness is so great as to threaten life immediately. Nor should it be given when, after the first few doses, the temperature rises, the heart’s action becomes more frequent, or more feeble, delirium increases, sleeplessness supervenes, or drowsiness deepens, so as to threaten to pass into coma. It should not be given if the urine contains albumen, unless life is imme-

* In a paper read before the Midland Medical Society at Birmingham, in February, 1880.

diately threatened. Nearly all the good effects, when indicated, are obtained from the administration of from four, six or eight ounces of brandy in the twenty-four hours. For the last thirty years I have made it the rule of my practice in the treatment of typhoid fever, to abstain from giving alcohol, if, in the case before me, I *doubted* the wisdom of giving it; and if there is a question in my mind of a larger or smaller dose, I, as a rule, prescribe the smaller. The reverse of this rule I laid down for myself in the treatment of *typhus*. In conclusion; to avert death from failure of heart power, when such defective cardiac action is not due to *degenerative* changes in its muscular tissue, alcohol, by its influence on the nervous system, is the *great* remedy in typhoid fever."

No man perhaps in our own country can speak more authoritatively on the use of alcohol in typhoid fever than Prof. Loomis, who, in his valuable book, sums up his conclusions thus:

1. "They should never be administered indiscriminately—that is, never give a patient stimulants simply because he has typhoid fever.
2. "Where there is reasonable doubt as to the propriety of giving or withholding stimulants, it is safer to withhold them, at least, until the signs which indicate their use become more marked.
3. "In every case, but especially when stimulants are clearly indicated, watch carefully the effect of the first few doses."

He then adds: "There are few whose experience in the treatment of typhoid fever is such as to enable them to positively determine, from the appearance of the patient, when the administration of stimulants should be commenced."

In the third series of the Medical and Surgical Report of the Boston City Hospital for 1882, Dr. C. E. Steadman, Visiting Physician, presents an analysis of 1,042 cases of typhoid fever, extending over a period of ten years. We make the following extracts:

Cases having no treatment—death-rate was 7.8 per cent.

Cases treated by quinine and salicylic acid in variable doses—death-rate, 9.5 to 11.5 per cent.

Cases treated by mineral acids—death-rate, 12.8 per cent.
Cases treated by sponge baths—death-rate, 14.9 per cent.
Cases treated by tub baths—death-rate, 18.3 per cent.
Cases treated by alcohol—death-rate, 37.1 per cent.

It is stated that those cases treated by alcohol were, for the most part, the worst. The quantity administered daily did not exceed *two* ounces of brandy—very much below the quantity advised by most writers, and even below that recommended by Dr. Steadman, which is put down at twelve ounces for the maximum. He would give one-half ounce spirits when the pulse is rapid and feeble. After becoming steady, wine should be repeated on its rising.

In those zymotic and infectious diseases, of which *diphtheria* affords a type, alcohol comes in as a sovereign remedy. Much has been written concerning the specific and antiseptic value of alcohol in this disease particularly. M. Sanné, in his elaborate work,* says: "Of all the antiseptics given internally, alcohol is the surest. The more pronounced the infection, the more should alcohol be insisted upon." Dr. E. N. Chapman, of Brooklyn, considers alcohol almost a specific for diphtheria. He says: "Alcohol is as antagonistic to diphtheria as belladonna to opium or quinine to malaria." He reports to have cured 95 *per cent.* of cases under his charge during a severe epidemic. Dr. J. L. Smith, in his valuable book,† referring to Dr. Chapman's monograph, says: "I believe, from my experience, that if given early and frequently in grave cases, as for example, one teaspoonful of brandy or whiskey, every half hour, it does have a tendency to render the disease more tractable, and that it therefore affords important aid in saving the patient's life, and I am willing to admit that it is as nearly a specific as any other agent." Whether or not alcohol is an *antidote*, according to Chapman, or an *antiseptic* as stated by Sanné, there is a diversity of opinion. In point of fact, however, its *exact* behavior chemically is of little value when we know by direct clinical experience that its employment is attended by the most decided beneficial results.

* *Traité de la Diphthérie.*

† *Diseases of Children.*

Pulmonary Tuberculosis.—The remedial agency of alcoholics in this disease has given rise, of late, to much discussion, and on this point the profession is somewhat divided.

Dr. N. S. Davis, in a report before the American Medical Association, arrived at the following conclusions:

1. "That the development of tubercular diseases is facilitated by all those agents and influences, whether climatic or hygienic, which directly or indirectly impair or retard the metamorphosis of the organized structures and the efficiency of the excretory function.

2. "That observations and carefully-devised experiments both show that the presence of alcohol in the human system, notwithstanding its temporary exhilaration of the cerebral functions, positively retards both metamorphosis and elimination.

3. "That neither the action of alcoholic stimulants on the functions of the human body, nor the actual results of experience, furnish any evidence that these stimulants are capable of either preventing or retarding the development of tubercular phthisis."

Dr. Davis, although a man of acknowledged ability and wide experience, differs in opinion with Dr. Austin Flint, an able diagnostician and high authority in pulmonary diseases. We quote from his *Practice*, p. 308:

"Basing my opinion on clinical experience, I do not hesitate to express the belief that in a certain proportion of cases, alcohol exerts a curative influence. Of the 62 cases of arrested tuberculosis which I have analyzed, in 14 the treatment, irrespective of hygienic measures, consisted exclusively in the use of alcoholic stimulants. In 9 of these cases the recovery was apparently complete, the patients remaining well after periods dating from the time of the arrest varying between four months and eleven years. Some cases which I have observed seem to exemplify in a striking manner the *curative* effects of alcoholic stimulants. Alcoholic stimulants, however, by *no means* exert a curative influence in *all* cases. The circumstances denoting their usefulness are as follows: If the immediate effect be that of a cordial—that is, if they produce a sense of comfort; if they be followed by a feeling of increased strength and a greater disposition to exercise; if they do not excite unduly the circulation or nervous system, benefit may be expected from their use. *Per contra*, if their immediate effect be discomfort; if they be followed by

a feeling of increased weakness and less disposition to exercise, and they excite unduly the circulation or nervous system, they will not do good, and they may do harm. The quantity to be taken will be variable, depending on the idiosyncrasies of the patient and the circumstances before mentioned." He says further: "I certainly am not prepared to advocate the use of alcoholic stimulants as a *prophylactic*; neither would I advise their use in doubtful cases."

Before concluding this subject, I wish to add a few notes regarding the best recognized *mode of administration*, as suggested by Dr. Geo. C. Pitzer, editor of the *American Medical Journal*," St. Louis. Dr. Pitzer's experience warrants his opinion. According to him, *pure* alcohol ordinarily, in drachm doses largely diluted with water and sweetened, if necessary, repeated every three hours, will meet the indications requiring it. Should speedy effects of the stimulant be indicated, then one-half drachm doses repeated every half hour. In some cases of rebellious stomach, *brandy* may agree better. In others, particularly *habitual drunkards*, *whisky* seems to agree better than all others. There are certain peculiar ethers found in whiskies and brandies not found in alcohol, and, owing to this fact, they perhaps agree with some patients when the latter is not tolerated.

Egg-nogg is considered by him to be the "best mode of administration ever devised," particularly where nourishment in a liquid form is required, as in typhoid fever, dysentery, and other diseases of a similar character. Dr. Pitzer prepares it as follows: "Take two fresh eggs; fresh unskimmed milk, one pint; powdered sugar, two heaping tablespoonfuls; brandy or whisky, four tablespoonfuls. Beat the yolks of the eggs till perfectly smooth, then add gradually the brandy or whisky, stirring all the while the spirit is being added. Next add the milk and sugar and stir till the sugar is dissolved. Now beat the whites of the eggs to a stiff froth, place it on the top of the mixture, and upon this grate a little nutmeg." Of this, Dr. Pitzer gives his patients from one to four tablespoonfuls every one or two hours.

Of the alcoholic liquors he considers *ale* and *beer* the least harmful. They are generally prescribed in two large doses. To reap their full benefits they should be given by rule.

According to Dr. Pitzer, from *two to four* ounces of ale or beer is enough for a single dose, and should not be repeated too often. "If too much is taken, the excess of alcohol is thrown off as alcohol, and in this effort the vitality of the patient is exhausted more than built up."

The limits of this paper have already far exceeded what I anticipated in the outset, but because of the importance of the subject, I cannot forbear quoting from that valuable monograph of Dr. Ezra M. Hunt, of New Jersey, who says:

"If to-day no physician would advise any patient to the use of any alcoholic drink, but restrict it within the close limits of his particular prescription, the limitation would be in harmony with the present demands of therapeutic knowledge. It is not merely that the morals of society would get a glorious health-lift, but the act would knock away the false prop which now upholds so many in the use of alcohol, and relieve us from the imputation of being accessory to the perverted habits of multitudes. . . . The facts as to medicine confine it within boundaries so narrow, that we must, in fealty to real science and right practice, hold it closely within its limits."

One other, whose opinion is of equal importance, Dr. N. S. Davis, of Chicago, says:

"While it is true that during the last thirty years I have not prescribed for internal use the aggregate amount of one quart of any kind of fermented or distilled drinks, either in private or hospital practice, yet I have continued to have abundant opportunities for observing the effects of these agents as given by others with whom I have been in counsel; and simple truth compels me to say that I have never yet seen a case in which the use of alcoholic drinks either increased the force of the heart's action or strengthened the patient beyond the first thirty minutes after it was swallowed."*

This seems to be rather an extreme view of the matter, and while Prof. Davis is recognized as a high authority in this country, yet he is more ultra than Richardson, whose motto I would adopt. He says:

"We all claim the right to use alcohol if, in our hearts, we believe we save life by it, save suffering, or lessen affliction. We merely contend—and *this is the point we want our*

* *Alcoholic Liquors in the Practice of Medicine*," p. 117.

fellow-laborers to recognize—that it must be used *secundum artem*. As a therapeutical agent, I have never excluded alcohol from my practice. But this is what I have done for nine years past: I have, whenever I thought I wanted its assistance, prescribed it purely as a chemical, *medicinal* substance, in its *pure* form, in *precise* doses, in *definite* order of *time*; as I have prescribed amyl nitrite, or chloroform, or ether, so I have prescribed *alcohol*."

Book Notices, &c.

Pharmacopœia of the United States of America. Sixth Decennial Revision. By authority of the National Convention for Revising the Pharmacopœia, 1880. New York: Wm. Wood & Co., 1882. Small 8vo. Pp. 488. Muslin, price \$4; leather, \$5; leather interleaved, \$6. (For sale by West, Johnston & Co., Richmond.)

The "Announcement" of this work—of the greatest value to every pharmacist and physician in the United States—so well describes its merits that we adopt many of its statements as our own. This edition of the Pharmacopœia differs essentially from its predecessors. More labor has been spent upon it than has been the case at any previous revision—not only by the Committee itself, but by a number of scientific bodies and individual workers. The arrangement of articles is alphabetical. The new arrangement is better. Crude drugs are more carefully defined. The systematic names are accompanied by the names of the authors and the natural orders. The definition of each drug is followed by a description. The more common adulterations are pointed out, and the characters given by which they may be distinguished. In the case of *chemicals*, the manufacturing processes have been omitted wherever tests of identity and purity are sufficient to characterize the substance, and where the products are not liable to variation, though made by different processes. Working processes, however, are given for all those chemicals, the composition of which is more or less dependent upon the mode of preparation. All chemicals of definite composition are accompanied by their chemical formulæ and their atomic weights, and, in each case, a minute description has been added, giving the physical characteristics. These are followed by tests of identity and tests of purity. Whenever any chemical is

capable of being readily assayed, a process has been appended. The nomenclature has been revised. (1) The official title of a vegetable drug is the systematic genus name. A few exceptions are allowed. (2) The plant name is to stand for the *part* of the plant directed to be used, provided only *one* such part is employed. (3) English titles are to be the scientific botanical names. But in the case of those drugs where the vernacular names are almost identical with the scientific names, or where long custom has sanctioned another name, no change is made. (4) Common synonyms are added, under the title, in brackets. (5) Latin names of alkaloids have been made to end in *-ina*, and the English names in *-ine*. In order to distinguish the so-called neutral principles, they have received the termination *-inum*, English *-in*. (6) The gender of Latin names of salts in *-as* and *-is* has been changed to the masculine (compare *New Remedies*, January, 1882, p. 58). (7) A number of special alterations in nomenclature were made for reasons carefully considered in every case. The greatest change is in the substitution of *parts* by *weight* for the weights and measures heretofore directed. The process of measuring is entirely eliminated, and weights are to be used exclusively, except as below stated. All preparations which are to be placed on the dispenser's shelves are to be made by weight; they may then be dispensed by weight or by measure, in whatever way the physician may direct, in the same manner as now. In recasting the preparations of the present Pharmacopœia so as to eliminate measures, care was taken that the strength of the new preparations should be as nearly as possible that of the old. A special table is added, which gives a comparative view of the strength of the old and new preparations. Only *fluid extracts* are excepted from the rule of using parts by weight. The Committee decided to make them *measure* for *weight* as heretofore, but to substitute the gramme and cubic centimeter for the troy and fluid ounce. The resulting fluid extracts will, therefore, differ about 5 per cent. in strength from those at present in use. One thousand grammes or one kilogramme make 1,000 cubic centimetres or one liter of fluid extract. Hence, 100 troy ounces make 105 fluid ounces; 100 avoirdupois ounces make 96 fluid ounces. Whenever necessary to specify *definite* weights, these are given in grains as well as in grammes. Where it was possible, the total weight of the finished product has been made equal to 100 or to 1,000, so that the figures representing the quantities of the ingredients at once indicate the percentage of composi-

tion. A number of obsolete preparations have been replaced by recent ones. The text is followed by useful tables, among them a comparison of degrees of thermometers; specific gravity and percentage of strength of the officinal acids and solutions of alkalies; percentage and specific gravity of alcohol. A complete index completes the book.

The Pharmacopœia is the lawful text-book until 1890. Its requirements of strength and purity of drugs and chemicals form the basis of criterion for custom-house officers, public analysts, and courts of law.

System of Human Anatomy, including its Medical and Surgical Relations. By HARRISON ALLEN, M. D., Professor Physiology, University of Pennsylvania, etc. Illustrated with 350 Figures on 109 Plates. Drawings by Herman Faber, from Dissections by the Author. Also, upwards of 250 Wood-cuts in the Text. Sections I and II. Royal 4to. Philadelphia: Henry C. Lea's Son & Co., 1882. Paper, enclosed in portfolio. Price, per section, \$3.50. (From Publishers.)

This "System of Human Anatomy," judging from the two "Sections" now received, promises to be the most valuable that has ever appeared in any language. Section I is on *Histology*, and was prepared by Dr. E. O. Shakespeare, Ophthalmologist in the Pennsylvania Hospital. It is beautifully printed on excellent paper, in 96 royal quarto pages; and, in addition, there are *many* separate card-board pages containing finely executed plates. The work of the writer makes an excellent review of every histological fact or view as held at the present day. This first Section forms a most valuable introductory to the Sections which are to follow, which will relate to descriptive and regional anatomy.

"Section II" is by Dr. Allen, and relates to "*Bones and Joints*." The descriptions and plates cannot be surpassed. In other words, they are accurate. This Section is composed of 145 pages of text, and numerous plates and wood-cuts to illustrate the appearance of each bone and joint of the body.

Beyond the above expression of opinion as to the merit of the work, we can do no more than give something of an announcement, as stated in the "Prospectus." It is to be completed in six "Sections," containing in all about 550 pages of letter press. Many of the figures are beautifully colored, as near nature as possible. Sections III, IV, V and VI will, respectively, relate to muscles and fasciæ; arteries, veins and lymphatics; nervous system; and organs of sense, of digestion and genito-urinary organs. A leading object of the au-

thor seems to be to make the work more *practical* in its character than are most anatomical books. We give an unqualified endorsement to his course; and if the four forthcoming "Sections" equal the two already issued, we will as unqualifiedly recommend them as we cheerfully do the two "Sections" now in hand. *Every practitioner* should have this work. Because graduates receive their diplomas as Doctors of Medicine, it is foolish for them to think that they will need no further study of anatomy, which all recognize as the very foundation stone in the study of medicine.

In the preparation of this work, the Publishers have done their part with a generous hand towards the profession—sparing neither labor nor money. It is now the duty of the profession to manifest their appreciation of such efforts as they have made to aid practitioners and students, by subscribing to the work. "Each Section," as sent to the subscriber, "is enclosed in an individual portfolio, thus preserving all [six parts—now being issued in heavy paper covers] in a perfect condition in case it is subsequently desired to bind them."

Microscopical Diagnosis. By CHAS. H. STOWELL, M. D., Assistant Professor Histology and Microscopy, University Michigan, etc., and LOUISA REED STOWELL, M. D., Assistant in Microscopical Botany, University of Michigan. Illustrated with 128 Wood-Engravings, and 47 Figures on Stone. Detroit: George S. Davis, 1882. 8vo. Pp. 250. (From Publisher.)

This is a useful book to every practitioner who knows how to use his microscope—as every doctor should know, at least, the principles of its use. It is one of the most serviceable of the now many instrumental aids for diagnosis of a large class of diseases, ranking in utility, we might say, right next to the thermometer. The book under notice makes no pretensions to being an exhaustive work on the subject of microscopy; but it does furnish an unusual amount of almost daily information on the subject of which it treats. It begins with a description of the microscope and how to use it, and then it goes on to describe, by text and engravings, the microscopical characters of blood in health and disease, epithelium, muscles, urinary deposits, skin parasites, various kinds of tumors, a number of various therapeutical and food articles, and closes with "some hints on the preparation and mounting of microscopic objects," written by W. H. Walmsley, of Philadelphia, and now reprinted from *The Microscope*.

Editorial.

The Transactions of the Thirteenth Annual Session of the Medical Society of Virginia, bound with this January number, contain some very interesting and instructive papers. Because of their bulk, we cut down the number of journal pages proper.

Dr. Robert Battey, of Rome, Georgia, has established a private Infirmary in his town. It is under the general supervision of his wife. It is entirely for ladies. A separate surgical ward, with the best appliances for antiseptic ovariectomy, affords complete facilities for conducting *surgical* cases. This is one of the few, if not the only, private hospitals in the Southern States. Since the South is a more healthful clime, and as the people are as genial in their disposition as in any other section of America, why not patronize Southern institutions of the kind referred to? Rome—the home of the immortalized Battey—is yet a town, with spacious lots, and buildings well suited to the purposes for which his Institution was established. Almost every lot of the town has spacious grounds. The town, besides being removed from malarial districts, has its shade trees on almost every premise, as on the sidewalks, and has really a far more healthy record during the year than any city north of Richmond, whose statistics we have examined. Why should not Southern doctors, at least, patronize such a sick-home as we now represent? Dr. Battey has been sent for—far and wide—throughout this country to perform surgical operations. Many a Northern and Western patient of affluence and wealth has requested his professional attention. If he were living in New York, London or Paris, the profession of this country, at least, would willingly confide to his treatment many a patient who needs his services. His great ability is none the less because he has opened a home-sick Infirmary in Rome, Ga. Dr. Battey issues a very modest card. Who has excelled him in the line of his special professional services, as referred to in this notice? We are glad he has taken such a step.

Medical Record Visiting List for 1883.—We regret we did not receive this excellent “Physicians’ Diary” in time to give it

due notice in the December number, 1882, of this journal. Among the printed matter is a description of the metric system, almanacs for 1882, 1883, and six months of 1884, table for estimating the duration of pregnancy, doses of drugs used hypodermically, doses of common and rare drugs, drugs suited for atomization, etc., disinfectants, urinary analysis, poisons and their antidotes, emergencies, treatment of asphyxia, etc. The "visiting list" proper is neatly ruled for each day of the year 1883. Two blank pages are for special memoranda; 4 for consultation engagements; 12 for obstetric engagements and record; 6 for record of vaccinations; 4 for register of deaths; 2 for nurses addresses; 4 for addresses of patients and others, and 13 for "cash account."

The New York Post Graduate Medical School has thus far met with gratifying success. The second term opens Jan. 8, 1883, and continues until April 28th, without intermission. It is hoped that with its enlarged accommodations, improved facilities for instructions, and increased corps of teachers, it will meet with still greater success.

Chambers' Weekly Medical Review.—Messrs. J. H. Chambers & Co., 405 N. Third street, St. Louis, Mo., have purchased the *Chicago Medical Review*, formerly issued semi-monthly from Chicago. It will hereafter appear under the title heading this notice, and will be transformed into a *weekly*, and will appear simultaneously in Chicago and St. Louis. Such an enterprize deserves commendable notice, and we cheerfully give it.

The Independent Practitioner, established 1879, which is an excellent journal, devoted to the usual branches of medical science, will hereafter have, as its medical editor Dr. L. H. Hunt. Address him at 411 Lexington Avenue, New York, N. Y. The "Columbia Publishing Company," of 42 Duane street, New York city, have charge of the publication. Annual price of the journal, \$2.50. We have noticed certain changes in this formerly excellent journal; and we are confident it will not be less valuable when issued by the new hands into which it has passed.

Dr. Geo. M. Beard, the renowned neurologist, died at his home in New York city of pleuro-pneumonia, January 19th, 1883.

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Original Communications.

ART. I.—The Physiological Action of the Venom of the Copperhead Snake—*Trigonocephalus Contortrix*. By ISAAC OTT, M. D., Eaton, Pa.

The poison of the copperhead snake has not been investigated to any extent that I am aware of. It is well known that this snake has a venom apparatus similar to that of the rattlesnake. It seemed to me an interesting question to determine if the venom of this snake differed from that of the rattlesnake. Practically, it is quite important to determine how the poison kills, that fatal consequences may be avoided.

My copperheads were procured from the vicinity of New Harmony, Indiana. In regard to their habits, they greatly resemble those of the rattlesnake. Like them, they love to take their bath, and to drink water. When at rest, they lie loosely coiled, with head and neck in the centre of the coil. In the act of striking, they bend the neck in the shape of an S, and vibrate their tail. When they strike, they do not remain fast to the animal, but rapidly loose themselves like the rattlesnake. Ecdysis in one of my specimens took place during the month of August. When two copperheads are together, and engaged in attacking a rabbit, upon the least movement of the other, the one will strike at him. They are easily run up to such a pitch of excitement that they will strike at any moving object. Rattlesnakes seldom at-

tack each other, if at all. The copperhead seems to be much more combative than the rattlesnake, for the former will continue striking several times at any moment and at everything which moves.

GENERAL ACTION.—*Experiment 1.* Rabbit, weight, $1\frac{2}{3}$ lbs., received, at 1.10 P. M., a stroke from a copperhead, in the eye and jaw. At first the animal sits still, rotates his head to the left, breathes at first slowly, then rapidly.

1.23 P. M.—Slight thrill running through the body.

1.38 P. M.—Lies down; pinching ears causes him to squeal; saliva flowing on the floor.

1.55 P. M.—Rabbit lies prone; heart frequent, weak and irregular; respiration very rapid.

2.20 P. M.—Breathing labored, frequent; tremor of muscles observed often.

4.35 P. M.—Heart seems better, although irregular; large swelling on the side of the neck; next day, heart weak, was accidentally seized by a large cat and killed. On *post mortem*, heart beating very weakly; liquor pericardii stained with blood at the place of stroke by snake, the subcutaneous tissues containing bloody serum; peristalsis active. There was some diarrhœa during the night.

Experiment 2. Rabbit was struck by copperhead snake at 1 P. M. The snake had rested six days.

1.27 P. M. Swelling of the lips; trembling of the head; no salivation. Next morning, heart-beat weak and feeble; could scarcely hop about.

2 P. M. Heart beat 120 per minute; extremities weak; cannot stand on them; has a convulsion occasionally.

At 3 P. M., the rabbit was found dead; heart firmly contracted itself; subcutaneous extravasations about the mouth—the place of injury.

Experiment 3. Large rabbit was bitten at 3.45 P. M., by three copperheads; pits still.

2 P. M. Moves about; is restless; wounds are purplish and swollen. During the afternoon is lying on his belly. Heart feeble and irregular. Was found dead next morning.

Experiment 4. Strong rabbit was injured by three copperheads (the snakes had rested eight days) at 2.20 P. M. The

animal immediately sinks down on his belly, feet spread out; breathing 58 per minute.

2.20 P. M. Convulsive movements of the posterior extremities.

2.28 P. M. Death. Intestinal peristalsis active. Ventricle beats irregularly, about 44 per minute; auricle beating about 120 per minute. Ventricle quivering, and relaxed bladder empty.

Experiment 5. Large rabbit was bitten by two large copperheads at 1.15 P. M. Death ensued during the afternoon, during a convulsive seizure. The snake had rested twenty-five days.

When an animal is struck by the copperhead, he usually sits still, breathing at first slowly—afterwards more rapidly. A slight thrill may run through the body. The wound soon swells, exuding, at intervals, bloody serum. The extremities become weak; the animal lies prone or on his side; the heart-beat is frequent and irregular; respiration very rapid; convulsions at times. The heart becomes weaker and weaker, more irregular, until finally the animal dies—the breathing keeping up till the heart fails. On *post mortem*, the wound is filled with bloody serum, the pericardial liquor is stained by the blood; the heart is beating feebly whilst intestinal peristalsis is active. The ventricle, on opening the chest immediately after death, is beating about 45 per minute, and finally the ventricle quivers and lies in a relaxed condition for some time, when it passes into a contracted state. Death in rabbits usually takes place in from two to ten hours. However, it can take place in eight minutes, where three snakes have bitten the rabbit. Death is mainly due to an arrest of cardiac functions, although the nervous disturbance aids.

ACTION ON MOTOR NERVES.—*Experiment 6.* Copperhead, after a rest of three weeks, struck a green frog, who had been kept in the aquarium for some time. In about half an hour death ensued. The motor nerves were irritable at 280 millimetres; heart arrested, relaxed; no reflexes present; heart not irritable to electricity.

Experiment 7. Copperhead struck a green frog at 2.50

P. M. Lies in the box with posterior extremities relaxed at 3 P. M.; when touched he drags himself along on his anterior extremities. 3.10 P. M. No sensation nor motion; motor nerves irritable at 350 millimetres, Du Bois' coil. 3.18 P. M. Ventricle quiescent, relaxed—cannot be set into activity by pinching; sinus venosus beating 45 per minute; acetic acid, when applied to the extremities, causes no movement. 3.30 P. M., rigor mortis.

Experiment 8. Black-spotted frog at 10.10 P. M., was bitten by a copperhead, who had rested eight days. Hops about; weakness in posterior extremities. 1.20 P. M. When pinched, hops well. 1.30 P. M. Tetanoid state in all the extremities; sensibility in all the extremities greatly diminished. 1.50 P. M. Frog thoroughly relaxed, apparently dead; motor nerves irritable at 170 millimetres, Du Bois' coil; heart beating feebly 44 per minute.

Experiment 9. Black-spotted frog was struck at 1 P. M. by a large copperhead snake; sits still; hops occasionally when irritated. 1.05 P. M. Weakness of the extremities, especially the posterior. 1.14 P. M. Loss of sensibility in the posterior extremities; also loss of voluntary motion; the anterior extremities still move when pinched. 1.30 P. M. Sensibility and voluntary motion of the anterior extremities lost; motor nerves irritable at 215 millimetres; heart-beat sixteen per minute.

In examining the preceding experiments, it is found that the motor nerves are irritable, even with a weak electrical current. The reflexes disappear. The debility seems to attack the frog at first in the posterior extremities, as the animal drags himself along by the aid of his anterior extremities. This stage of debility is frequently accompanied by a tetanoid state. Finally, however, all irritants fail to bring out a reflex movement; the ventricle is relaxed, quiescent, and not able to be set into activity by the faradic current—the sinus venosus, however, beating 45 per minute. As the motor nerves are not affected to any great extent, it is necessary to determine how the venom affects the sensory tract.

SENSORY NERVES.—*Experiment 10.* Green frog, at 2.45

P. M., bitten by a copperhead in the back; left posterior extremities had its blood vessels ligated. 2.55 P. M. Weakness of the posterior extremities; lies prone upon his abdomen; hops about occasionally; the diminution of sensibility in both posterior extremities seems equal; lower jaw drooping; deep inspirations at intervals. The diminution of sensibility is greater in the posterior extremities than in the anterior. 3.15 P. M. Seems to be in a stupor. 3.50 P. M. When thrown on his back, makes a slight movement with the right anterior extremity; no reaction upon pinching; ventricle beating feebly 54 per minute.

Experiment 11. Black-spotted, vigorous frog, had his abdominal aorta ligated, and was bitten at 3.30 P. M. At 3.50 P. M., unable to hop; lies prone upon his abdomen; legs folded under him; sensibility equally diminished in all the extremities. [4.20 P. M. When thrown on his back, the posterior extremities move a little; anterior extremities do not move at all; the application of sulphuric acid to all the extremities causes no movement of any of them; ventricle arrested; sinus venosus acting.

When the above experiments are examined, it is found that the sensory tract is greatly affected. But that it is not the terminations of the sensory nerves in the skin is shown in the experiment where the abdominal aorta of the frog was ligated. Here the sensibility was diminished to the same degree in all the extremities. The other experiment shows that the seat of want of sensibility is in the central nervous system.

SPINAL CORD.—The tetanoid state of frogs and convulsions of rabbits show that it excites it at a certain stage of the poisoning.

CIRCULATION.—*Experiment 12.* Rabbit was bitten by two copperheads (one had rested twenty-one days, the other only two days) at 2 P. M.; died at 3.15 P. M.

TIME.	PULSE.	PRESSURE.	
2.10- 0 P. M.	76	82	
2.10-15 "	73	80	
2.13-30 "	24	74	Convulsive Movement.
2.14-30 "	21	70	
2.20- 0 "	—	50	
3.15 "	death	—	

Experiment 13. Strong rabbit at 2 P. M., by three copper-heads. They had rested twelve days.

TIME.	PULSE.	PRESSURE.
2.14-08 P. M.	62	78
2.14-15 "	63	80
2.15-30 "	63	78
2.16-30 "	72	74
2.21- 0 "	65	61
2.34- 0 "	—	61
3.09- 0 "		61

During the night the animal died.

The experiments detailed above were performed by means of Ludwig's kymographion. They show that the venom of the copperhead depresses the arterial tension, and decreases the number of heart-beats. As to the influence on the blood corpuscles, microscopically I saw no change in either the red or white globules. With the micro-spectroscope the bands of the oxy-hæmoglobin presented their usual appearance. I have seen the effects of chronic poisoning with the copperhead—that is, the rabbit lives a few days, and then dies. It seems to me that from my experiments the following conclusions may be drawn :

1. The venom of the copperhead is weaker in toxic activity than that of the rattlesnake.

2. The heart, with both kinds of venom, becomes greatly prostrated, and in rapid deaths is their main cause.

3. The venom of either snake does not affect the sensory nerves.

4. The sensory centres are affected by both venoms.

5. The muscular excitability continues to be little affected at the time of death by the poison of the copperhead.

6. The two venoms greatly resemble each other in physiological activity.

7. The cardiac force, rhythm and frequency are lowered by both venoms.

8. The arterial tension is greatly lowered by both venoms.

9. The blood, after copperhead poisoning, shows no microscopic changes of its globules, or any difference in its spectrum.

ART. II.—**Phthisis, and the Means to Prevent It. Light and Air.**
(Continued.) *By M. A. RUST, M. D., Richmond, Va.

In the last paper, starting from the generally admitted fact of the influence of light on our organism, we asked: *How does sunlight act on our organism?* Finding nowhere a direct answer to this question, we made a short review of the main facts which modern physiology has brought to light, and finally dwelt on two points: The influence which sunlight exercises through the medium of the retina, and then on the fact, demonstrated by recent physiological experiments, that under the influence of sunlight, respiration becomes stronger, quicker and deeper, and that, through the want of sunlight, respiration becomes slower, shallower, or more superficial.

We have seen how, in shallow or superficial breathing, through the feeble action of the thoracic muscles and the insufficient inflation of the lungs, the suction power of the thoracic cavity is greatly reduced, and how through this reduction of suction power, the blood flows more sluggishly and slowly through the lungs to the heart, which, becoming less filled, performs less work. The result of this condition is a slower flow of blood, higher pressure in the veins, and a stasis in the capillary system. We have farther shown how, from this stagnation in the lung capillaries a chronic hyperæmia in the capillaries of the alveoli and bronchioli is finally evolved, which renders the lung tissue vulnerable to injury and prepares the ground for the future development of phthisis. All we have said on this subject has been demonstrated by vivisections and experiments which here, perhaps, are difficult to make; nevertheless we can, in many instances, simply by close observation, convince ourselves of the action of respiration on circulation. Take a subject with a well-developed thorax, clear skin, and well-marked, prominent jugular veins, and let him take a full and deep inspiration. Keeping your eyes and fingers on the jugular veins, you will find these veins collapse under them. This will show how, through the deep inspiratory

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act, the aspiration of the venous blood from the body becomes more energetic. .

In a subject equally fitted, but with a paralytic thorax, the inspiratory act will not produce any appreciable change. During shallow inspiration, when the thorax expands insufficiently, the venous blood flows more slowly, and the condition is but slightly altered from that which existed during expiration.

By means of a pneumatic apparatus in my possession, which furnishes compressed and rarefied air, I have been enabled, in many instances, to observe interesting variations in the volume of the jugular veins and of the radial pulse, resulting from the variations in the quantity and density of the air inhaled. Thus, by making the party inhale compressed air ($\frac{1}{25}$ of an atmosphere), the jugular veins were felt, under the touch of the fingers, like hard strings, turgid and gorged with blood. This shows that, through the pressure of the compressed air in the lungs, the aspiration of the venous blood becomes momentarily impeded. If the same healthy subject were made to inhale rarefied air ($\frac{1}{25}$ to $\frac{1}{20}$ of an atmosphere), the jugular veins collapsed under the touch of the fingers. This shows that the diminution of the intra-thoracic pressure results in an increase of the quantity of the blood in the thorax and a decrease of the peripheral circulation.

This will show itself still more strikingly in the pulse. Through the lessened intra thoracic pressure, the arteries become less distended with blood, and the radial pulse, in direct proportion to the degree of rarefaction of the air inhaled, will go through the whole scale of changes observable in the dying, from the weak pulse to the wiry, small, flickering pulse, and then the insensible pulse, when the heart can no longer accomplish its systole. Anyone can make this experiment on himself, without apparatus, with the aid of the fingers only. Place, on the right radial pulse, the fingers of the left hand; keep the pulse well under them, compress, with the right hand, the nose so that no air can be breathed; then attempt deep and prolonged inspiration; soon the pulse will grow feebler and gradually vanish. By

this manœuvre the air in the lungs becomes rarefied and the party who tries it is placed in the same condition as if he had inhaled rarefied air. This is the famous experiment, first made some forty or fifty years ago by Johannes Mueller.

Let me mention, in this connection, two very ingenious mechanical arrangements which put graphically before the eyes the action of respiration on circulation. These are the kymographion and the pletismograph. The *kymographion* [sphygmograph] is the more recent of the two. It is portable and very easily adjusted; it is applied to the radial pulse or any other superficial artery, and traces on a strip of paper more or less defined curves, corresponding to certain changes in the circulation. The *pletismograph* is the more complicated, but more interesting. It was devised in 1873 by Dr. Mosso, then a student in the Physiological Laboratory of Professor Ludwig at Leipsic. It is so constructed as to record changes in the circulation of the blood in any part of the arm or forearm. It consists mainly of a glass cylinder closed at the lower, and opened at the upper end, into which the arm or forearm is introduced and closed in, water-tight, by an India rubber collar. The cylinder is then filled with water. A narrow tube connects the cylinder with a registering clock-work, which revolves a strip of paper before a pen, which moves up or down, according to the quantity of water contained in the tube. Now, if the person sitting with his arm in the cylinder, takes a full and deep inspiration, the venous blood flows more rapidly from the body, through the lungs to the heart; the arm, at this moment, contains less blood and contracts; in consequence of this contraction or diminution of the volume of the arm, the water in the connecting tube is sucked back into the cylinder to fill up the empty space, and the point of the pen descends by a particular mechanism at the same time, and traces a descending curve. If the inspiration is shallow, and the lungs and thorax are insufficiently inflated, the blood flows slowly and sluggishly, the arm is not much contracted, there is but slight displacement of the water in the tube; the curve traced deviates but slightly from a horizontal line, and does not show much difference between inspiration and expiration.

Originally the pletismograph was devised by Mosso to demonstrate the expense of energy necessary to the accomplishment of brain action—the contraction of the arm in the cylinder showing the flux of blood from the body to the brain: every action of the brain—emotional or intellectual—being accompanied by a contraction of the arm and a descent of the curve-tracing proportional to the amount of work pen performed by the brain.

In a paper first printed in the *Proceedings of the Royal Academy of Turin*, November, 1875, Dr. Mossa, now Professor of Physiology in the University of Turin, gives an account of all his experiments on brain action, which, a short time afterwards, were repeated by Claude Bernard before the French Academy. I will quote only a few of them:

Mossa first names an emotional brain action. There was a tie of warm friendship between Mossa and Prof. Ludwig, of Leipsic. Whenever Mossa was sitting with his arm in the cylinder, making observations on himself, and Professor Ludwig entered the room to look into his researches, the pleasure which Mossa felt at his visit was so intense as to require for its accomplishment the greatest amount of blood; the afflux of blood to the brain being rendered visible through the contraction of the volume of the arm, the tracing pen describing one of the deepest curves. In this way, every kind of emotion, pleasure, disappointment, anger, etc., was graphically demonstrated.

A friend of Mossa, a student of physiology, was in the habit of boasting that for him writing and speaking in Greek was no more difficult than writing and speaking in his mother tongue. His arm was put into the apparatus, and a sentence in Italian was laid before him. By simply writing a copy of it, the curve of the tracing pen showed but little deviation from the straight line; on translating it into Latin a pronounced curve was traced; translating it into Greek, the curve descended deep down from the horizontal line.

Next a sheet of paper was laid before him, on which, alternately, Italian, Latin and Greek sentences were written. Mossa was able to see by the deep or descending curve, cor-

responding to a greater contraction of the arm, when his friend was reading the Greek sentences.

Arithmetical problems were given; the greater amount of blood required by the brain for their solution was indicated by a proportional contraction of the arm.

Experiments made on persons during sleep showed an occasional contraction of the arm. This must be regarded as an indication of a dream. A similar contraction was observed whenever a sound or a noise was produced; this shows that the sense of hearing remains more or less active during sleep, and also gives new force to the old saying that a dream may be spoken into the ear of a sleeping person.

You might justly ask, What has all this to do with the subject before us? is there any connection between our subject and brain action? To this I will answer that speaking of the *phthismograph* as a means to demonstrate the influence of respiration on circulation, I could not forego mentioning its highly interesting and edifying demonstrations of brain action; and as for the relations of sunlight to brain activity, there are a good many. The fundamental one I will thus briefly state:

Brain action is nourishment converted into energy. Nourishment is produced through the action of the sun rays; consequently, we may regard thought as the highest result of sunshine.

The functional inter-action between the brain and the other organs is a matter of common observation. Brain action, emotional or intellectual, takes a different shape in the same individual when his stomach is empty to what it does when he has taken a comfortable meal or a glass of wine; different when he is lying on his back; different when he is in an erect position. We know likewise that the functional activity of any organ is dependent on an increased supply of blood. Limbs, in exercise, assume an increased volume. Any effort of the brain, emotions and passions, make the veins of the frontal region, the capillaries of the conjunctiva, etc., appear more filled with blood. In traumatic injuries, or in diseases involving the loss of a portion of the skull, or in animals, where, experimentally, a piece of the

skull has been removed, we observe how the exposed part of the brain, when incited to thought or emotion, increases in volume, so as to protrude through the opening in the skull, the increase of volume being the result of the distension of the brain vessels.

Hence, it becomes obvious that brain action is dependent on an increased supply of blood. The total amount of blood in the body being always the same (at least, not subject to such rapid changes), the supply of blood required for brain action must be withdrawn from other parts of the body. This had to be demonstrated, and it was Mossa who demonstrated it, by simply laying the forearm of the person to be experimented on in a cylinder filled with water. By these and similar researches a path will finally be opened along which to conduct the study of mind out from the dreamy domain of metaphysical speculation into the lucid fields of exact science; and we may, at no distant future, be enabled to cultivate a new branch of medical science—*physiological psychology*.

The much-cherished idea that there is still a something, a force of quite a different order, behind the brain cell, is not touched by these studies; science has nothing to do with it. In spite of the advances made into the mysteries of our inner self, we have still to bow humbly before forces beyond our comprehension. The very brain cell as yet appears to us, like a distant star, wrapped in a veil of mist.

To the question, How does brain action arise? one may give as an answer: "An outside stimulus excites a molecular movement in a certain group of brain cells, and is followed by an increased afflux of blood to the brain." So far we stand on firm scientific ground, although we have already reached the extreme limit of our knowledge, and again stand before a closed door.

A score of questions crowd upon our mind, to which the wisest can give no answer. In what manner is this supply of blood distributed in the brain? through what channels? and by what processes does the streamlet of blood reach exactly the group of cells where a thought or an emotion shall be made fluent?

Again: When we observe in the various emotions and passions, the manifold involuntary play of the muscles of the face; when we see that most ignoble of all the passions—fear or terror—always accompanied by a certain degree of momentary paralysis of various groups of muscles—sometimes even by a relaxation of the sphincters—we ask the question, Is there any contiguity or connection between certain emotional brain cells and the origin of the corresponding motor nerves? And what is the answer? These are mysteries and problems which will occupy the scientific mind for many generations, unless we fall back upon supernaturalism and take, in place of the missing fact, a *word*.

From these lofty regions we again descend to firm ground, and will say a few words about breathing through the mouth and through the nose.

Nasal respiration is the natural and proper way to breathe. The air, passing through a bony, tortuous channel, thickly lined with the Schneiderian membrane, moistened on its surface by a continuous layer of mucous glands, covered with ciliated epithelium, bristling with hairs at the entrance of the nasal fossæ—is filtered, moistened and warmed before it enters the lungs. With some persons breathing through the mouth is a bad habit, which ought to be broken by any means. Very often it is compulsory. Acute or chronic catarrh, tumefaction of the Schneiderian membrane, polypi and other small tumors render that important channel imperious. Active treatment here becomes of primary necessity, and the physician or surgeon can, in such cases, really prevent great future mischief.

There is another mode of bad breathing which I feel tempted to call unconscious suicide. It sometimes happens that a person of weak constitution and cowardly disposition is taken seriously ill. He is terror-struck at the mere thought of death. He lies day and night moaning and groaning, takes in but a feeble whiff of air, which does not penetrate far before it is expelled again with a groan. In fact, it sounds as if the whole function of breathing only consisted of short, expiratory groans; the lungs are never inflated! When the vital energy is already at the lowest, the action of

the heart must, necessarily, by this kind of breathing, become weaker and weaker, and the heart finally stands still. I have several observations on this lamentable condition, and whenever I meet with it in a case of serious illness, my prognosis is an unfavorable one.

I have a few final remarks to offer concerning respiration, viz.: its influence on nutrition, and its relation to heredity. But our time drawing to an end, I must postpone them to another meeting. In spite of all my apparent meanderings, I take care not to lose sight of the main object of these papers, which is to discuss the ways and means to prevent the development of consumption. Hints to this purpose, in the shape of a series of conclusions drawn from the facts which preceded them, formed the end of my last paper; and, as shallow breathing or diminished capacity of the lungs has been the main point dwelt on in to-day's discussion, I will present to your consideration some additional means to counteract the pernicious effects of shallow respiration.

Open air treatment was proposed and applied some time ago. With the originators of this system of treatment it consisted mainly in letting the consumptives live entirely—sleeping included—in the open air, allowing only a light shelter in inclement weather, and retirement indoors during frosts. The good effects of this treatment have been averred in many cases, but it has never been carried out on a large scale—the accumulated mass of prejudices amongst the public, as regards the dangers of “colds,” forming an almost insurmountable obstacle.

If we send our consumptive patients to the so called health resorts in a milder Southern climate, we also follow a certain plan of open air treatment in a more restricted form. There is no specific virtue in the air of any of these places. A Southern climate allows the patient to spend more time out of doors—this may be all. There is and has been an ever-changing fashion about these health resorts; their reputation rises and falls, and others come into fashion. If there be a climate fitted to improve shallow respiration, it can only be the climate of certain altitudes.

It is a fact which was observed long ago, especially in

Switzerland, that the frequency of consumption generally decreased with the ascending degree of elevation. True, single cases of phthisis have occurred at intervals even on the high Alps, attacking healthy, robust herdsmen, and snatching away their lives in a few weeks; but recent scientific inquiries (by Klebs and others) have shown such cases to be acute miliary tuberculosis, communicated to man through the milk of a tuberculous cow.

On the strength of the common observation, that consumptives generally derived great benefit from a prolonged sojourn in certain altitudes, Davos was founded about 25 years ago as a summer and winter health resort for consumptives. This world-renowned spot is situated in the east of Switzerland, in the canton of the Grisons, in the valley of Davos, 5,200 feet above sea level, surrounded by mountain walls 8,000 to 10,000 feet high, and thickly clothed, to a height of 1500 feet from the valley, with pine woods. Till the middle of this century, no traveller's foot had trodden this forlorn valley; to-day one finds there spacious, imposing hotels (eight or ten of them), handsome boarding houses, private buildings, churches and places of amusement, shops of every description, and crowds of people of all nations—England sending the largest contingent. It is in the last decade that Davos has acquired its high reputation as a health resort for consumptives. The winter patients arrive in October, and do not leave until April. Snow commences to fall in November—often several feet deep at once—and the place becomes snowed up, almost cut off from the rest of the world, for the whole winter. Fresh falls of snow occur frequently, but no thaw till near the end of March. Nevertheless, the valley is well guarded against winds by a complete mountain bulwark; sunshine is abundant, and solar radiation very efficacious. As far as I am informed, very little medicine is administered by the local physicians, the rarefied air alone being considered as the curative agent. Care is bestowed on the regulation of exercise in the rarefied air. Fever and high temperature are counteracted by cold ablutions and cold baths. In the regulation of diet, milk and wine form the two most prominent articles. Many cases of

recovery, especially in hæmorrhagic phthisis, are recorded. In general, hæmophthisis occurs very rarely at Davos. A certain class of patients, on their arrival, are inconvenienced by accelerated respiration, which becomes alarmingly hurried if they venture higher up on the mountain walks. Such patients are temporarily kept at rest till toleration or acclimatization has been established.

It is but recently that the attention of men of science has been directed to the climate of altitudes: since then, a considerable number of new health resorts on altitudes have sprung up in Germany and Switzerland. If it be of primary importance to increase the diminished capacity of the lungs, to improve the insufficient and shallow breathing, to increase the energy of the heart, we have, in the air of these altitudes, the means most fitted to accomplish this task. There is nothing specific in their air; the atmospheric air is the same there as everywhere else—composed of nitrogen and hydrogen (with a slight admixture of carbonic acid and watery vapor) in exactly the same unchangeable proportions as on the sea level.

On the sea level the whole column of the atmosphere above us presses on every square centimeter of surface of the body with a weight of 1033 gram. (about twelve pounds on every square inch of surface). Therefore, as each superincumbent stratum of air presses on the stratum below it, and the weight of all the higher strata are pressing on the lowest one, this strata—the air of the sea level—must necessarily be at its maximum of density. The higher we ascend the less weight rests on our body surface. Barometer in hand, we see the column of mercury gradually rising; each superincumbent stratum of air to which we ascend, having less weight to bear, becomes more expanded, thinner, lighter, and exercises on the mercury of the barometer, as well as on the surface of our bodies, or on any other point, a diminished pressure. It follows that a given volume of air on an altitude is lighter in weight—contains less of each of its component parts, consequently, less oxygen, than the same volume of air on the sea level.

Now, a certain amount of oxygen, determined by weight,

is necessary to accomplish the function of nutrition. The shallow-breathing individual (and every person consumptive or predisposed to consumption is shallow breathing) will not get oxygen enough in the rarefied volume of air he inhales, and will, according to Vogt, involuntarily breathe quicker and deeper to satisfy his need of oxygen. Consequently, it is not, as one hears, the oxygen of the mountain air which produces the good effects, but, on the contrary, *the want of oxygen*.

There is another action of the mountain air, namely, its direct influence on the circulation. By the lessened pressure of the rarefied air on the surface of the body and on all the peripheric blood vessels, the capacity of those vessels is increased; they become more filled with blood. The blood flowing more to the surface, is subtracted from the internal organs, and, owing to the increased energy of the heart, resulting partly from the improved respiration, the whole circulation will be accelerated.

Since Rokitansky has shown us that a paralytic thorax (or predisposition to consumption) is accompanied by a smaller heart, and modern physiology has demonstrated that through shallow breathing the propulsive action of the heart is lessened, the heart muscle enfeebled, and that heart and lungs are reacting reciprocally on one another, we are in a position to do something rationally and effectively for our consumptive patients; we may invigorate the action of their hearts.

Thoughtful physicians, in their treatment of consumption, have always paid a great deal of attention to the condition of the heart; and the means to improve it are, happily, not wanting. The invigorating effects of alcoholic stimulants, digitalis, etc., are sufficiently known. But, besides the undesirable and often injurious after-effects of these drugs, their stimulating and tonic effects only extend over a limited space of time, whilst the air of altitudes acts imperceptibly and constantly, day and night, without a second's intermission, and produces, by its long duration, radical modifications. Through the deeper and quicker respiration the heart is incited to increased action; and, in consequence of the lesser pressure of the rarefied air on the body and the peripheric

blood vessels, it accomplishes more work with less expense of energy.

It has been established by competent scientists that an altitude, between 2,500 and 6,000 feet above sea level, should be the site to select for an elevation health resort. Below 2,500 the rarefaction of the air is not sufficiently efficacious; above 6,000 it becomes more and more uncomfortable, injurious, and, for a certain class of patients, dangerous.

The much-lauded effects of the climate of Colorado, which have been attributed to a specific virtue in the air, to the dryness, etc., must be explained in the above-given way. In the Rocky Mountain range, occupying an area in the United States of nearly one million square miles, having many plateaux and passes at an elevation of from 3,000 to 4,000 feet, a great number of sites, suitable for such health resorts, must be found; and there must be room enough to offer a refuge to the consumptive population of the whole civilized world.

More centrally located, much easier of access, more beautified and adorned by nature is the Virginia mountain range—the Blue Ridge. I have no personal knowledge of the locality; but if it offers elevated spots fit for the purpose, and the elevation movement should make further progress, these mountains may, in a near future, become a source of wealth as well as a source of health.

Since Dr. Vogt, of Switzerland, at the International Congress called the attention of the profession to the advantages of the elevations, an upward current in the medical mind has made itself perceptible, and one may safely prophesy a great future to the elevation resorts.

I have hitherto used the terms altitude and elevation, elevation-air, etc., instead of mountain, mountain air, etc., and this purposely. It is not the mountain or the summit of a mountain on which to select the site for the health resort, but a spot in an elevated valley, in a pass, or on a plateau, protected against the fury of the weather by surrounding, possibly forest-crowned heights.

There are now two important sanitary movements on foot in Germany—one already in a fair way to execution. A congress of tailors and physicians, ladies of fashion and man-

milliners, dandies and artists of reputation, will shortly meet in Munich to devise a form of female dress which shall be at once healthy and pleasing to the æsthetically cultivated eye. The war between reason and fashion has been going on for a long time, and reason has always been defeated by fashion. This time, auxiliaries from the enemy's camp having come over into the camp of reason, the leaders are hopeful of victory. We will send them our best wishes.

The other more important movement is still in an embryonic condition. It is proposed to call a congress, national or international, to devise means against the alarming spread of consumption, which, from civilized countries alone, year after year hurries away an army of about one million into the jaws of death. Hospitals, institutions and corporations richly endowed by old legacies, provide, to a certain degree, for the consumptives of the poorer classes; but, after all, nothing is accomplished save to feed and shelter them till they die. A hospital, moreover, is the worst shelter in which to place a consumptive, where he has to breathe and re-breathe an air laden with disease germs.

The main feature of the plan of this prospective congress is to have the heights of central Europe dotted with health resorts, located on suitable elevations, surrounded by forests, easy of access, in which the consumptives with ample, small or no means shall find a refuge—the income derived from the rich to be applied to the support of the poor. Of course it will take many a year before such a plan can be matured and put into execution.

Were I a member of that congress I should have many suggestions to make, amongst them :

1st. Springs of mineral water, with all their earthly and unearthly ingredients, matter from the moon, cosmic dust from comets' tails, and the analytical chemist sitting before the fountain with pen and ink and a printing press, with which to make analyses, should be rigorously excluded.

2d. It should by all means be prevented that these resorts become places of fashion, with all its unhealthy discomforts, toilet-making, corsets, high heels, etc.

3d. There should be *one* specialist for each resort—*two*

would cause friction—and, as Gothe says, that the parson must learn from the actor, so this specialist must learn from the smooth-tongued quack—not his criminal deception, but his plausibility.

Air, simple air, is too harmless a thing at once to command confidence; and, as the old legend tells, that the children of Israel always turned away from the invisible God to the more substantial gods glistening with gold and gems, so will the average consumptive, in his anxiety for the salvation of his body, always fall back from empty air to strong-tasting drugs. And, as no creed has ever succeeded without prophets and priests to sing and drum its praises, so the methods of such health resorts will require a good deal of trumpeting before they take a firm hold on the public mind. Above all must this public mind, by oral and written teachings, be first cured of its marvelous belief in dosing.

[TO BE CONTINUED.]

ART. III.—**Nervous Exhaustion.** By C. G. POLK, M. D., Philadelphia, Pa.

As nervous exhaustion is the epidemic disease of the period, and is so protean in its character, anything which will mitigate the suffering and consequences of its lesions must be acceptable to the medical profession. My experience in this malady has been extensive, and I presume my success has been as satisfactory as that of other physicians. Still, I even yet wish for remedies more potent than those I have at my command.

So far, however, the greatest difficulty I have encountered has been in cutting off the causation of the malady. With men it can be traced either to overwork or to sexual excesses; with women, to the feverish excitement in which they live, to the wear and tear of their nervous system in supplying their artificial wants, late hours, insufficient sleep, too much novel reading, and too little healthy exercise. The habits in which the disease has emanated must be discontinued, and an opposite mode of life pursued; the business man

must lay aside the duties of the counting-room, dismiss financial cares, and seek repose, amid cheering and enlivening scenes. If this be done before the disease has progressed too far, before the nerve cells have been too extensively used up, recuperation usually rapidly follows, and normal vigor is regained. But such an event pre-supposes the integrity of the brain and nerve cells, to an extent to imbibe and appropriate their pabulum from the blood; if the malady has exceeded this, such agents as will aid in rebuilding nerve structure must be employed, in addition to rest.

Recalling the fact that animal tissues are constructed and reconstructed from food, the logical inference is, that the patient should consume such food as will aid in replacing the wasted tissue. On theoretical grounds, the demand would seem to be for oils, fats, and phosphorized compounds; and my experience has supported the accuracy of this theory. Cod liver oil has seldom disappointed me; persons who had taken phosphorus pills, chemically pure, and chemically very impure syrups of the hypophosphites, ergot, nux vomica, and used electricity *ad nauseam*, have experienced an increasing sense of comfort as soon as they begin to take the oil. Of this I try to secure the administration of two ounces every twenty-four hours, selecting always the best Norwegian variety. It is best given with a vegetable tonic—the plan pursued by Dr. Williams, of the Brompton Hospital. A better tonic, however, never was devised than the combinations of iron, quinia and strychnia. Easton syrup in an ounce of the infusion of colombo makes an admirable vehicle. I like it better than any of the vehicles recommended by Dr. Williams, but not quite so well as the compound syrup of the hypophosphite of iron, the formula for which was published in a recent number of the *Virginia Medical Monthly*. This syrup, it will be recollected, contains the hypophosphites of iron, lime, soda, manganese, quinia and strychnia. The formula is a creation of my own, but I do not make it for the trade, having consigned the preparation to the skill and integrity of Mr. Ashmead.

This combination of remedies has gained many advocates since I published the formula in 1865. Dr. J. J. Jones, of

Little Rock, says: "In general debility, with emaciation and nervous exhaustion, it has proved itself to be an efficient tonic, meeting and successfully fulfilling all the indications for which it is recommended."

Dr. Arthur Watson, Manchester, England, has found that in general exhaustion, this combination has done much good in the course of a week.

Dr. Alexander McMaster, of Hot Springs, Ark., says: "For those in commercial circles, and, in fact, all ranks and conditions of men, in whom the brain and nervous system has been exhausted from excesses or overwork, I have found no combination of remedies so efficacious in restoring the vital forces, and prompt in bringing relief."

Dr. Wallford, of London, says that he "has prescribed this combination for several months, and found it successful in most cases, more especially those of over-worked brain."

Dr. T. Hughes, of the Denorwig Hospital, Llauberis, says it is "superior to every other preparation in over-exhaustion due to too much brain work."

To the above, I must add my own endorsement—not quite so strong as some of those I have quoted, and yet sufficiently strong to say I meet with many cases I could not manage without it. It forms, with the colombo, an admirable vehicle for cod liver oil; it contains the strychnia which aids so powerfully brain-cell nutrition; it contains the hypophosphorous acid from which the system may build its kephaline for brain purposes; it contains iron and quinia to stimulate the digestive functions, and manganese—an efficient alterative and hepatic stimulant. Its value is, however, above question; it is one of the best combinations ever formulated. But it alone will fail of producing any decided benefit without given in combination with the oil. When I encounter patients with exhausted brains and nervous systems, with impaired digestion, I almost always prescribe iron, quinia and strychnia, but unless the digestion is impaired, I order at once one of the organismal glycerites which I introduced into medical practice.

A preparation used by several physicians in this city, and containing the same ingredients, is known as the "Compound

Syrup of the Hypophosphites of Manganese." It is a conception of Mr. M. E. Ashmead. It differs from the preparation already described in its pharmaceutical character. The iron and manganese are dissolved by sodium citrate, instead of hypophosphorous acid. It is more agreeable to the taste than the other preparation, more permanent, less apt to disagree with the other stomach, or cause headache. In color and taste it very closely resembles the elixir ferric phosphate with quinia and strychnia. The formula can be found in the advertising pages of the *Medical Monthly*.

The above remedies are especially adapted to cases of nervous depression resulting from over-work, and they may be very much aided by the continuous ascending electric current. If, however, the intellectual faculties are seriously involved, as the result of over-work and brain-worry—the power of attention seriously impaired, the memory treacherous, and the will-power feeble, I usually give my glycerite of vitalized phosphites with strychnia, and have witnessed from the combination almost incredible results.

Very many of my cases, however, are the result of sexual excesses. This class includes the miserably degraded masturbator, the onanist, who seeks sexual pleasure legally or illegally, and yet shuns the responsibility of parentage, the libertines who revel in the ruin of innocence, or gratifies his sensual nature with the mercenary harlot, and the married man, who gives unrestrained indulgence to his sexual appetite. Of these unfortunate beings, the masturbators is the most unfortunate, and his case is the most difficult to manage. The great trouble is in breaking up the habit; but upon this point hinges in a great measure our success or failure. With the cause removed, the effects are usually remediable.

But the course to be here pursued deviates widely from that suggested for over-work. The salient point in treatment is to stop the further expenditure of his vitality; the discontinuance of the habit may not suffice for this. Involuntary seminal emissions and heavy loss of prostatic fluid rapidly drain off the ebbing tide of vitality. The stereotyped plan of hard bed, light supper, mental diversion, are

all very good as far as they go; but they do not sufficiently cover the therapeutical ground. A sedative that will make a profound impression upon the nervous system is demanded, and with this strychnia may also be given. One-thirtieth of a grain of the sulphate may be administered thrice daily, and forty grains of the bromide of sodium at bedtime. A full dose of the compound infusion of gentian furnishes an excellent vehicle in which to administer the bromide. To this, lupulin is often advantageously added. Thus the nocturnal emissions are usually controlled, but our patients are very prone to relapse; a rich supper, a glass of wine, an exciting novel, or even fondling or caressing one of the opposite sex, may lead to lascivious dreams, and a nocturnal emission. Weeks, and sometimes months, are required in securing a release from such danger; but the physician must not himself get disheartened, or allow his patient to become discouraged. He must ever keep before his mental vision the power of mind over matter—the remarkable extent to which physical conditions are modified by mental states. After several weeks of exemption from nocturnal pollutions, if the sexual organs seem weak, the fluid extract of damiana should be given in dessert-spoonful doses thrice daily. I know of no agent which is as useful in such cases as damiana. It braces up and restores sexual vigor as no other agent does; the result is far more permanent when gained by this remedy than by any other. For several years, owing to failure with the product of other laboratories, I have used the fluid extract prepared by F. O. St. Clair, of Washington.

If, however, the injury to his brain be great, in addition to the damiana, a phosphorous compound will be indicated; the choice lies between the combinations of iron, quinia, strychnia and manganese, and one of the organismal glycerites; and the basis of the choice will rest upon the decision whether his lungs be tuberculous. If his lungs be free from tuberculous exudation, then I prefer the iron, quinia and strychnia combination. As to my choice between my own formula and the one created by Mr. Ashmead, I will say I prefer my own when it is regularly taken; but, being bitter, it is more apt to excite disgust and be neglected, while Mr.

Ashmead's preparation, being more pleasant, is seldom objected to. The cost of the two are about the same to the physician—one dollar per pound. The glycerites, requiring chemically pure glycerine, are about twice as expensive.

Mr. Ashmead's syrup has one rare merit—it is not copyrighted, and consequently can be used by physicians without violating the code of ethics.

If, however, there be tuberculous infiltration, the iron combinations are objectionable; they tend to excite hæmorrhage. Hence, the compounds obtained from organic sources are preferable. Of these, the glycerite of kephaline has pleased most physicians. It may be given in ten-drop doses with extract of malt and damiana. This combination has won favor with many; the demand for a combination has sprung up, and is now supplied by Bolles Brothers, of Newark, New Jersey, under the name of "phosphorized tonic."

In my practice, however, I more freely prescribe the glycerite of organismal hypophosphites made by Ashmead, or my glycerite of vitalized hypophosphites—not that they have any advantage over the kephaline, but usually wishing to use glycerine as a menstruum, I fear the employment of a low grade of glycerine by druggists. The following is the composition of one thousand parts of the glycerite of vitalized hypophosphites:

R _y . Tribasic acid phosphates of calcium, magnesia, iron and sodium.....	20 parts.
Tribasic phosphites of magnesium, potassium and ammonium.....	20 parts.
Glycero- and oleo-nitrogenous hypophosphites, having as their bases calcium, magnesium, iron, potassium, sodium and ammonium.....	115 parts.
Hypophosphorous acid, blended with albumen	10 parts.
Kephaline (a glycero-nitrogenous compound, containing three units of nitrogenized glycerine and one of hypophosphorous acid).....	105 parts.
Free hypophosphorous acid.....	10 parts.
Chemically pure glycerin.....	720 parts.

The dose of this compound is a teaspoonful thrice daily.

I have, so far, not placed it in the hands of the trade, but a considerable number of physicians even prefer it to the

kephaline. It, however, is more expensive; a thirteen-ounce bottle cannot be sold to physicians for less than two dollars, while chemically pure glycerin alone is worth about seventy-five cents per pound.

The onanists constitute a considerable per cent. of patients who apply for treatment for nervous exhaustion and impotency. They are very generally married men whose wives wish to avoid the cares and responsibilities of maternity. The imperfectly completed coition, the withdrawal before the emission, the nerve strain to enjoy nature's "most intense pleasure without incurring nature's" consequence tells severely upon the violator of nature's laws. The loss of erectile power is the lesion which troubles the imitators of Onan the most. Even they can momentarily secure a respectable induration; but almost the moment they touch the vulva an emission follows, and the penis becomes abnormally flabby. For such I prescribe continence, rest, damiana and strychnia until normal vigor is regained, and then natural coition in moderation. Occasionally I have found it necessary to use electricity—the upward continuous current; but such cases have been rare—the rest, damiana and strychnia being usually all that is required to give relief.

Then comes the old man with the young wife; he wants rejuvenating—often an impossibility, but occasionally attainable. Damiana, hypophosphites and strychnia, with a phosphorized diet, constitute the remedies upon which the physician must depend.

At some future day I will cull from my case book a list of cases treated for nervous exhaustion, with the remedies and results.

2219 *Catharine street, Philadelphia.*

Anæsthetic Mixtures.—The Vienna mixture, used in 8,000 operations without accident, consists of three parts of ether and one of chloroform; Billroth's, three of ether, one each of chloroform and alcohol. The committee of the Medico-Chirurgical Society, of Great Britain, recommends one part, by measure, of alcohol, two of chloroform, and three of ether.

ART. IV.—**What the General Practitioner should know of the Throat and Nose.** By F. TIPTON, M. D., Selma, Ala. Formerly Clinical Assistant to one of the Surgeons of the New York Eye and Ear Infirmary; also formerly Clinical Assistant at the Ophthalmic, Aural and Throat Clinic at Bellevue Hospital.

At the solicitation of many general practitioners, the writer has determined to add this paper to a series already written for the benefit of general practitioners on similar special topics. (See *Virginia Medical Monthly*, articles on "Ophthalmology and Otology for General Practitioners.")

The aim of this article will be to present a synopsis of the *diagnosis and treatment* of such diseases of the throat and nose as commonly fall to the care of the average physician in daily practice—such diseases, in fact, as the writer himself, a general practitioner, prescribes for daily in his own practice in a city of about ten thousand inhabitants.

The instruments needed are: One Bosworth's nasal speculum, one probe, Jarvis' polyp-snare, one set of Newman's or Sass' spray tubes, with attachments, one good tongue depressor, cotton holder, post nasal syringe, head mirror, two throat mirrors—one one inch in diameter for the larynx, and one five-eighths of an inch in diameter for the posterior nares, one Smith's powder blower, one Mathieu's tonsillitome, and one Gross' extractor for foreign bodies. These will serve the purpose admirably.

Beginning with the nose: Seat the patient to be examined before a window or Argand burner; put on the head-mirror; tilt the patient's head backwards until the nose comes well into the focus of your mirror; place the thumb of the left hand on the tip of the patient's nose, and press upwards and backwards; introduce your speculum, which will flare open the alæ and expose everything thoroughly. Once get the use of the forehead mirror well fixed, and there is no trouble about operating. The writer again calls attention to the necessity of learning this art of illuminating, at the risk of being tedious; but it is an art so simple, so easily acquired,

and so few practitioners take advantage of, that he feels justified in again directing attention to it. I myself would feel as completely at sea without my head-mirror as without a thermometer at the bedside of a feverish patient. Remembering that these articles are intended to *simplify and condense* special subjects, we will proceed.

The *special* diseases of the *nose* are :

- 1st. Foreign bodies.
- 2d. Acute coryza.
- 3d. Chronic nasal catarrh.
- 4th. Ezena.
- 5th. Syphilis.
- 6th. Tumors.
- 7th. Deviations.
- 8th. Nose bleed.

Foreign bodies can often be removed by the simple device of closing the *free* nostril, putting the lips well over the child's mouth, and blowing forcibly into the throat. I have succeeded thus, time and again, much to the delight of timid mothers, who fear even the semblance of an instrumental extraction. When this fails and the child is very restive, I administer chloroform and use Gross' extractor, which has never yet failed me; sometimes, when the body is soft, it can be impaled with a long needle and teased out. All this is best done with the illumination of the head-mirror—the child sitting before you in some one's lap.

When *an acute coryza* cannot be aborted by one or two doses of quinine and Dover's powder (ten grains each for an adult) and a hot foot bath, then Hagar's remedy may be used, or a prescription which was a great favorite with my most excellent teacher and a successful practitioner, Dr. Bosworth, of New York city, viz.: Bismuthi, ʒj, morphine, gr. ij. Mix and snuff up the nose as required.

Chronic nasal catarrh.—The symptoms are those of a chronic cold in the head, a disposition for mucus to slip down the throat upon arising in the morning, obstructed breathing and tendency to staining the handkerchief with blood, when suffering from fresh accessions of cold, disagree-

able hawking, etc. The true and only *exact way* to observe this disease, though, is to look behind the velum palati and see the condition of the turbinated bones and their mucous covering, which will give the whole status at a glance, whether ulceration or simply thickening is present, the amount, etc. Adjust the forehead-mirror as before; let the patient breathe through his *nose*; depress the tongue with the tongue spatula, holding it with the thumb and forefinger of the left hand, with the middle finger knuckle under his chin, warm the little mirror, and carry it back behind the velum, when you will see an exact image of the posterior nares. If the velum *hug* the posterior pharyngeal wall too closely, let the patient pronounce the French word "*en*" (or say "*ong*") which will cause the velum to fall forward and give you a glimpse of the parts. If catarrh exists, the mucous membrane covering the turbinated bones will be found thickened and covered with pus or mucus; in the atrophic variety of catarrh (which comes on late in the course of the hypertrophic catarrhs) this membrane is pale and atrophied, though still secreting abnormal products. The most skillful operators are sometimes baffled in their attempts to see these parts, but generally there is but little difficulty if the operator will only keep up a *steady focus* and be patient; with a docile patient I can teach a student the manœuvre in a few moments.

The following treatment has been most successful in my hands: Syringe out the posterior nares daily with Dobell's solution, viz.: Acid carbolic, gtt. xlv; sodæ bicarbonate, sodæ biborate, aa ʒij; glycerin, ʒij; aquæ, q. s. ʒxij. Mix. This should be done with the post nasal syringe, guided by the light of the head-mirror, the patient depressing his own tongue; pass the beak of the syringe behind the velum and discharge a small quantity of the solution at first from the instrument until the patient becomes accustomed to its use. Then throw all in, and let it run out of the nose into a basin held in the patient's lap. If the operator prefer not to use the mirror, let the patient *face* the light, and let the operator stand instead of sit, and proceed as before, using the *direct*

light of the mirror instead of the reflected light. This manœuvre requires less technical skill than almost any other required in the treatment of these affections, and can be accomplished by any one. The ring on the piston rod of the syringe should rest on the thenar eminence of the operator's thumb, and not encircle the end of the thumb as it is commonly used. This ensures against entangling the beak in the fold of the soft palate and lacerating it. The syringe should hold about two ounces.

After using three or four syringe-fuls of the solution, then spray the throat and nose well with glycerole of tannin, 3j to water, 3j. This done, touch the throat and vault of the pharynx with a twenty-grain solution of nitrate of silver. To swab the vault well use a cotton-wrapped probe applicator; let the roll of cotton be about three-eighths of an inch in diameter, and about three-quarters of an inch in length. The probe should be of soft metal, and the portion wrapped with cotton should be turned up at almost a right angle with the shaft of the instrument. Dip this into the twenty-grain solution; let the patient depress his own tongue; breathe through the nose, and you can then very readily pass the probe behind the velum. Press it firmly against the vault, and retain a few moments. Repeat these applications every other day until the mucous membrane becomes healthy in color and the secretions are normal in character and quantity. A soft iron knitting-needle, roughened at the extremity, and set in a soft wooden handle, will do for a probe applicator.

I always give the patient a nasal douche besides, although many otologists object to it. I have used them time and again without a single mishap; indeed, I have a number of small children using them almost all the time. I direct them to put a table-spoonful of salt and a tea-spoonful of fluid extract of witch hazel to each quart of water, and use night and morning, *luke-warm*.

In all cases, attention must be paid to the general health, and great care taken to prevent fresh seizures of cold. The patient should sleep, in winter, in a room without fire, and

keep the feet warm and dry. I like, as a tonic alterative, Dr. Goodell's mixture of the "four chlorides," viz.:

Ry. Hydrarg. bichloride,	. . .	gr. j-ij
Liq. arsen. chlorid.,	. . .	f3j
Acidi hydrochlorici, dil.,		
Tinct. ferri chloridi, aa,	. . .	5ij
Syr. zinziberis,	. . .	5ij
Aquæ, q. s.,	. . .	5vj.

M. Sig.: Two tea-spoonfuls three times daily in water after meals.

In some cases it becomes necessary to remove the hypertrophied mucous membrane to remove the obstruction to breathing. This can be done by caustics, etc., but the best way is by Dr. Jarvis' snare.*

This operation is one of the radical means of treating this trouble, and is very successful. The writer was working in the same clinic, assisting Drs. Jarvis and Bosworth, when the former devised and perfected this operation. It is not difficult, and only requires time and patience. When done *slowly* there is little hæmorrhage.

In the atrophic catarrhs, irritating parvules, as sanguinaria, diluted with three parts of lycopodium, should be blown up the nose and into the throat by Smith's powder blower, two or three times weekly, in addition to the detailed treatment.

Ozæna is recognized by its fetid odor and the presence of ulcers of the mucous membrane. It requires the same treatment as nasal catarrh, with the addition of insufflations of iodoform several times weekly with Smith's powder blower. I always give these cases mercury and iodide of potash, unless they are above suspicion. Under no circumstances do I omit these remedies if the bones be necrosed. Crusts and loose bones should be removed at once.

Syphilis of the nose, once seen, is never to be forgotten. Any *large* ulcers in this region are suspicious, and it will do no harm to use mercury and potash in all obstinate cases.

The tumors most commonly seen in this region are *gelatinous polypi* (myxomata). They are easily discovered on inspection with mirror and speculum, and very readily re-

*See Dr. Bosworth's book on the Throat and Nose.

moved with Jarvis' snare. I have removed two or three at one sitting from the same person.* There is little danger of too much hæmorrhage, and no hesitation need be felt by any one who attempts the operation. The attention of the patient is first drawn to these tumors by the increasing obstruction to breathing, which is quite characteristic when the tumor is large.

The deviations of the septum are best left alone, unless causing much discomfort.†

Epistaxis, when profuse, is treated at the Bellevue clinic by tamponing with pledgets of cloth, saturated in a solution of ferric alum, twenty grains to the ounce of water, or else persulphate of iron, one to three. By using the mirror and speculum, the bleeding point can sometimes be seen, and the first pledget placed immediately over it. It is rare that the posterior nares has to be plugged also, if this tamponing be well done anteriorly. I saw drachm doses of ergot used successfully in Dr. Lewis Smith's clinic in the case of children, to check nose bleed.

The diseases of the tonsils are: 1st. *Acute tonsillitis*. 2d. *Acute follicular tonsillitis*. 3d. *Hypertrophy of the tonsils*.

Acute tonsillitis is easily recognized, and should, if possible, be *aborted* by calomel purges and large doses of quinine and opium (twenty grains of quinine to one-quarter grain of morphine), repeated once or twice in the twenty-four hours, where the case is seen early. This failing, use tincture aconite root in three-drop doses every hour till the physiological effects become manifest. The ammoniated tincture of guaiac, in drachm doses, every three hours, is also beneficial in modifying this affection.

There is one measure which deserves special mention in this connection, viz.: the scarification of the tonsils to relieve engorgement. It is seldom resorted to by general practitioners, who commonly avoid operative measures, in my experience, with unnecessary caution. It is wholly devoid of danger, and often gives striking relief—sometimes greatly

*See Dr. Bosworth's book for the technique of these operations.

†See Bosworth for operations for this condition.

to the discredit of the conservative attendant, who hesitates and allows others to do work which he himself should perform. Any long, sharp knife will do, with a tenotome or a narrow bistoury, wrapped to within an inch of the point; transfix the tonsil and cut towards the median line of the fauces. Make several incisions, and let the patient gargle lukewarm water to encourage free bleeding. I am thus particular in treating of this affection because it is sometimes a most distressing disease, and one requiring prompt and positive action.

Great relief is often afforded by the steam atomizer charged with sedative remedies; and by *hot* gargles (a drachm of soda to a pint of *hot* water), and by hot, moist applications to the throat externally. There is little opportunity for brilliant treatment in this affection, save in those cases which yield promptly to scarification. It is unnecessary for me to say that this little procedure is best done with the head-mirror to guide the hand. Every effort should be made to abort the disease with the remedies mentioned. Abscesses must be opened as soon as the tonsil *feels soft* to the touch, by the same methods that have been detailed for scarification.

Acute follicular tonsillitis is accompanied by a deposit, and is sometimes confounded with diphtheria, from which it can be distinguished by the fact that the deposit is limited to the neighborhood of the follicles, and can be easily scraped off with a piece of soft white pine. The best test is to run a small probe into each little mass of deposit; if it passes into the distended follicle, the diagnosis is clear. *Acute follicular tonsillitis*, though often severe, is entirely devoid of danger, and yields readily to tincture of iron, which is, in my experience, a specific in its treatment. Purge the patient briskly with calomel, then give from ten to twenty drops of tincture of iron, with ten grains of chlorate of potash, aa, in a half a drachm of water, and syrup of acacia every two hours. Swab out the throat with a forty-grain solution of nitrate of silver once or twice; give antiseptic doses of quinine and aconite, if the fever runs high; and then the disease is soon checked.

Hypertrophy of the tonsils is best treated by excision. Temporizing measures to please timid mothers are applications, daily, of powdered alum with a flat, wooden spatula, also of tincture of iodine and of chromic acid, ʒj to water ʒj. But *excision* is the only remedy. The writer has never seen a troublesome hæmorrhage follow the operation, and his experience whilst with Drs. Bosworth and Jarvis was extensive. The operation was often entrusted to the youngest members of the special class, who performed it well and successfully. Dr. Warren Stone, of New Orleans, once a highly respected authority (now dead), used to say to his class, never operate until the child's breathing at night became distressing; then practise excision. Dr. Mackenzie, a noted British authority, says that a mixture of tannic acid ʒij, gallic acid, ʒvj, water, ʒj, slowly sipped, will check almost any hæmorrhage in this region. Application of the finger or sponge directly to the part is generally all that is necessary.

Elongated uvula, when annoying, should be cut off—re-trenched in length. This is best done with long-handled scissors and dressing forceps. There is a popular fancy that this operation endangers the voice—an idea as erroneous as it is wide-spread. The writer removed a considerable portion of the uvula of the finest male voice in his section of country without impairing vocalization in the least.

Before leaving the subject of diseases of the tonsils, I am particularly desirous of calling attention to the *treatment of diphtheria*, believing, as I do, that it is one of the diseases which demonstrates the success of skillful and specific medication. When once the deposit makes its appearance, there is little trouble in distinguishing the disease. The firmly adherent character of the membrane, its disposition to spread rapidly, its resemblance to wet chamois leather, together with the swollen cervical glands, form an unmistakable array of symptoms that strikes terror to the heart of the anxious parent long before the doctor has come to confirm her apprehensions.

It is well not to commit one's self too freely in pronouncing upon the nature of commencing sore throat. Sometimes the deposit of diphtheria begins in the nose, and some-

times in the vault of the pharynx, and travels downward—much to the confusion of the over-positive medical attendant. I have seen this happen more than once. I make it a rule, in all cases, to examine the *cervical glands*, and if I find them tumefied I guard my diagnosis, no matter how mild the throat symptoms may be.

In speaking of the treatment of diphtheria, I trust I may, with pardonable pride, say that my confreres in this city have long been conspicuously successful in the treatment of this terrible scourge. Particularly has Dr. C. D. Parke, an old and honored practitioner of this city, been unusually successful in his management of these cases. Long before a line was ever written on the use of the muriated tincture of iron in the treatment of diphtheria, Dr. Parke was curing his patients with this agent with a speediness and certainty that has led him to regard it as a specific, so far as any remedy can be. His treatment is substantially as follows: If the mildness of the disease permits, he clears the bowels out well with a purgative; then he gives to even the *youngest* child the following mixture, *every hour, night and day*, until the disease yields:

R. Tinct. ferri chloridi.....5ij
 Potass. chlorat.....5j
 Syr. acaciæ,
 Aquæ, aa.....5ij. Mix.

In severe cases, he begins with this immediately, without awaiting the action of the purgative. He tries to get a swallow or two of milk given between doses, which he thinks serves not only as nourishment, but to prevent the iron from upsetting the stomach and bowels. He uses no local treatment at all—in fact, he denounces it as hurtful when the child resists. That Dr. Parke is eminently successful I can cheerfully testify.

The treatment successfully practiced by Dr. Peterson, of Greensboro, in this State, one of the most successful practitioners in the South, is almost the same. He gives more weight to the preliminary calomel purge, and uses the iron freshly dropped into glycerin and water, from ten to fifteen drops, gradually increased if the disease does not show signs

of yielding. He uses no potash, but he mops the throat with equal parts of the tincture of iron and glycerin. Every one should read his most lucid and practical monograph on this subject, published in the Alabama State Medical Association's Transactions for 1881. There is no better article anywhere that relates to this subject.

I am anxious to *emphasize* this matter, believing, as I do, that this is, *par excellence*, the treatment of this deadly scourge. Such is my faith in iron, continuously and unremittingly used, in large doses, in this affection, I should feel myself guilty of criminal neglect did I not endeavor, by every means in my power, to persuade others into my own positive convictions on this subject. It has been the writer's privilege to witness the treatment of this disease in many quarters of our country; and he is *sincere* when he maintains that *no where* has he seen so large a percentage of recoveries in the treatment of this disease as in Central Alabama, under the plan above detailed. That iron is used by nearly all practitioners, the world over, in this disease, I am well aware; but that it is *correctly* used, I am not prepared to say; but I think many failures of success in treating diphtheria are due to the fact that the dose is not *large enough*, and not *persistently* and *unremittingly* given—*night and day*.

It is in these points that the success of Dr. Parke's treatment becomes conspicuous. He never remits the treatment unless pains in the bowels occur or vomiting sets in. This, he claims, can be obviated by the free use of sweet milk. It looks like cruelty indeed to awaken the little sufferer from a sweet, refreshing sleep to force down its delicate and sensitive throat the constantly recurring dose. But the hand of the physician is here emphatically that of the guardian angel; and he who neglects the golden moments that sleep is stealing, will often find too late his tender sympathy little else than criminal neglect.

[TO BE CONTINUED.]

ART. V.—The Sytemic Treatment of Diphtheria by the Topical Application of Drugs. By HUGH T. NELSON, M. D., Charlottesville, Va.

At a time when diphtheria, Attila-like, is invading with conquering arm all parts of the earth, spreading devastation and death in the path of its advance; and when, too, the medical press of both hemispheres is teeming with the writings of those whose positions demand respect, your correspondent must appear presuming in having anything to say upon the subject. But if the following remarks shall lead to investigation by competent observers in the direction about to be indicated, he will feel satisfied, even though the idea perish still-born.

Until within the past few years, the investigations of those who have succeeded in demonstrating the existence of *bacteria* in the blood, secretions, false membranes, etc., of persons affected with diphtheria, have had little interest for the average practitioner. Now, however, even though it has not been positively determined whether these minute organisms are the *cause* or the *effect* of the disease, or whether they are *merely accidental associates*, it is universally conceded that their mere presence—since the disease does not exist without them—is of itself a matter of interest; and the idea must present itself in some way to every mind that if we could keep these bacteria out of the system, or destroy them as soon as cognizant of their presence, we would either prevent or cure a malady with the infectious elements of which these microscopic organisms are so intimately associated.

Nor does it matter whether the disease is, in its incipency, purely a local one, or whether the local manifestations are only evidences of pre-established systemic infection, provided we can discover means for prophylaxis and cure.

Recognizing the fact that the disease is zymotic in character—i. e., that the poisonous principle to which it owes its power is of the nature of a *ferment* or putrefactive agent—almost from the time when it was first described attempts have been made to treat diphtheria on antiseptic principles.

In the main, such attempts have proved abortive, since the patient would either recover or succumb to the ferment or *fermenticide* before the body could possibly be rendered aseptic. And this, because no matter what be the agent employed, a percentage of it among the different tissues and fluids composing the human organism, sufficient to render them aseptic, is incompatible with the performance of these vital functions upon which the existence of the organism depends.

But since these bacteria, whose association with diphtheria is constant, are at first introduced in small numbers into the system, and are soon found in incalculable myriads clogging with dead leucocytes and their own proliferating forms all the avenues by which the health and strength of the body is maintained, is there not something in the whole realm of nature, in itself harmless to the human economy, which we can at will introduce into the blood in small quantity, and which, gifted with power of proliferation, may multiply itself with such rapidity as to starve out or perhaps feed upon its dangerous compeer, and avert the disasters following in its deadly wake?

In the fall and winter of 1878-'9 a very fatal epidemic of diphtheria (the mortality was between fifty and sixty per cent. of all cases) prevailed in the western portion of Halifax county, Virginia, where I was then practising my profession. The different physicians resident in that portion of the county used different methods of treatment, and consultations among ourselves were frequent; but nothing that we could do seemed to mitigate the severity of the disease, more or less of which has ever since, in the same fatal form, prevailed in the section embracing Halifax and Pittsylvania counties.

In the fall of 1880, I was summoned to a patient with very heavy diphtheritic membrane covering the entire faucial mucosa to such an extent as almost to occlude the passage. I was in the habit of preparing for my diphtheritic patients a mixture containing pepsin and muriatic acid for both local and internal use; but on this occasion, having none of the acid, I directed that good vinegar was to be procured, and that the pepsin was to be applied to the fauces upon a feather moistened with the vinegar, every two or three hours. To

my surprise, on seeing this child the next day, I found the membrane much thinner, with a shriveled look, and separating from the subjacent tissues. With a pair of dressing-forceps I extracted the membrane from the uvula and surface at its base entire, the piece removed having the appearance of the end of the finger of a very much soiled white kid glove. This local treatment, together with the administration of iron, quinine, chlorate of potash, meat soups and whiskey, was employed, and the patient convalesced rapidly.

The next and last case of diphtheria that I treated in Halifax county, was given all of the above-mentioned drugs in full doses, and also the mixture of pepsin and muriatic acid, but the little patient succumbed to the invasion of the larynx by the diphtheritic membrane—tracheotomy being contraindicated by the extreme depression of the vital forces, which had occurred even prior to the access of the *croupal* symptoms.

I have now notes of ten cases of diphtheria, in the diagnosis of which I was careful to exclude the possibility of the disease being mistaken for follicular pharyngitis or tonsillitis accompanied by a confervoid growth of spores, both of which affections are mistaken, even by those who ought to know better, for true diphtheria. In two of these cases faucial paralysis still remains to a slight extent. In all of these cases the constitutional disturbance has been severe, and even bearing in mind the probability that the tendency of the diphtheria which we have *now* in our section is to assume a milder type than ordinary, they have passed to convalescence with great rapidity. The treatment has been “*supporting*” from the access, embracing iron, quinine, chlorate of potash and alcohol; but the local use of *pepsin and cider vinegar*, in the manner above described, has been extremely satisfactory—in almost every case the membrane having entirely disappeared from the fauces in twenty-four hours, and in none of them maintaining longer than forty eight.

Is it too much, then, to ask of the medical profession that they give trial of this simple application? And may it not be possible that cider vinegar—neither acetic nor lactic acid will have the same effect—contains within itself a germ which, when introduced into the human system under certain conditions, is capable of inducing a fermentative change

destructive of these very organisms upon which diphtheria may almost be said to depend? The tumefied and irritated faucial mucous membrane in diphtheritic subjects, containing in its more superficial layers an albuminoid principle swarming with bacteria of a special kind, is known to be a fertile hot-bed in which fermentative changes may take place—proven so in consequence of the readiness with which it takes on changes of a putrefactive nature. These putrefactive changes may even result in *septicæmia*, and doubtless—though it has never been my misfortune to witness it—death from diphtheria does take place in this manner.

The *sporules* of the *vinegar plant*, as is well known, have the power of arresting and preventing fermentative changes by their own proliferation, the process of which is the type of fermentation. May not this process begin when vinegar is applied to the faucial mucous membrane of diphtheritic subjects, aided by the catalytic action of the pepsin; the multiplication of the sporules in the blood being accomplished under the influence of the oxygen supplied to that fluid by the decomposition of the potassium chlorate administered to the patient in large doses? These same sporules, becoming inert, of course, as soon as they have performed their function of either starving out or destroying the diphtheric ferment (bacteria), are eliminated from the system.

Are there any who are willing to push investigation in this direction, and determine, not on merely theoretical grounds, the absurdity or otherwise of the theory presented?

At any rate, this method of dealing with the local manifestations of diphtheria will, I feel confident, give as much, if not greater, satisfaction than any other, and will prove of great benefit, particularly if, as is maintained by many observers, the diphtheritic membrane itself be a frequent source of re-infection. And the writer will be pleased to hear, either through the *Medical Monthly* or by letter from any who may choose to investigate this matter, or to adopt this method of treating the local manifestations of the disease.

Clinical Reports.

Case of Chorea, due probably to Rheumatism and Endocarditis. By G. TULLY VAUGHAN, M. D., Lowesville, Va.

I have recently had a patient whose case would seem to support the views of Mr. William Stewart, of England, in regard to the *unity* of origin of acute rheumatism, carditis and chorea—that origin being the pathological properties existing in the white blood corpuscles as the result of *follicular tonsillitis*. The following is a synopsis of the case :

A healthy farmer, 25 years of age, was attacked with follicular tonsillitis on the 25th November, 1882. The attack was quite severe, confining him to bed for a week; but in two weeks from the beginning of the attack, he was well enough to go fishing, and stood in the cold water for some time, getting his feet wet. On the 16th of December (about three days after this imprudence), I was called to see him, and found him suffering intensely with pain in the left knee, hip, back, with fever—in a word, with acute articular rheumatism. Subsequently, most of the joints of the body suffered, also the lining membrane of the heart, producing endocarditis, which was perceptible for only two days. Alkalies formed the basis of the treatment, and by the 10th of January, 1883, he was convalescent, although suffering from acute diarrhœa, which could not be attributed to the effects of medicine or diet, and which lasted for about ten days, in spite of mild remedies. The joints were very slightly enlarged.

Original Translations.

From the French and German. By WM. C. DABNEY, M. D., Charlottesville, Va.

Osteoplastic Amputation of the Foot.—At the meeting of the Société de Chirurgie, on the 20th of December last, M. Le Fort presented a paper by M. Follet, of Lille, on this subject. We take the following abstract from *Le Progrès Médical*, of Dec. 23, 1882 :

Two cases are reported by Folet, in which he united the

calcaneum and tibia by suture, and obtained excellent results. He employed the button suture, devised many years ago by Bozeman, of New York, for vesico-vaginal fistulæ. M. Le Fort proposed this sutural comminution of the bones in order to bring them more evenly together, and thus promote their union, but he had himself hesitated to put the method in practice for fear of injuring the soft tissues, on which the weight of the body would have to rest after such an operation; but, he said, he had obtained excellent results without using sutures, but if it could be proved by experience that the skin was not injured by the use of these sutures, all objections to them would be removed. It was a matter of extreme difficulty to obtain an accurate and beneficial union under other circumstances. Surgeons of the present day are less timid about uniting bones with foreign bodies than formerly; the Germans, according to M. Le Fort, keep the ends of the bones together, after resection, by driving steel nails into them with a hammer.

M. Chaput said he had repeatedly seen Hahn use nails to keep the calcaneum and tibia together, after excision of the ankle joint. The nails were allowed to remain in the bones a month, at the expiration of which time they could be readily withdrawn, and then the wounds healed promptly.

In view of these facts, M. Le Fort saw no objection now to the sutural union of bones.

M. Verneuil said that he believed the sutures might be useful; but in one case, where the tibia and os calcis were united by Krillon, after the manner of Le Fort, the bones were not firmly united.

M. Despres said that a foreign body could not be allowed to remain in a bone for a month with impunity. The probabilities were that if this were attempted, the bone would be provoked to suppuration, and small sequestra would be formed. On this account he was opposed to M. Le Fort's method, if it took as long as that of Hahn.

MM. Lucas-Championniere and Perrier were of a different opinion, and called attention to the numberless cases of resection of bones in which no inflammatory trouble was produced.

M. Trelat said he would prefer silver to iron wire as a suture.

In replying to the criticisms on his paper, M. Le Fort said that bones had a natural tendency to unite when their opposing surfaces had been denuded of periosteum, etc. He stated further that, according to the experience of surgeons

thus far, the sutural union of bones had been attended with no evil consequences, except in cases of fracture of the maxilla, when the bony ends were bathed in the secretions of the buccal cavity.

Tubercular Osteitis, or Caries of Bone.—M. Poulet, in the name of M. Riener and himself, read a note on this subject before the Société de Chirurgie on Dec. 20th, 1882—*Le Progrès Médical*, Dec. 23d, 1882:

According to the authors, these two affections, which were separated by Nélaton, are one and the same disease. They constantly found the characters of tubercle in caries, while they were not able to recognize the fatty degeneration of the bone corpuscles, which has been considered characteristic of caries. The osseous tubercles present themselves in three forms, depending on their mode of development:

(1) Primary and chronic tubercle, which leads to necrosis of a limited portion of osseous tissue, and to the formation of a cavity containing a sequestrum.

(2) Tubercle, which is late in development but rapid in its course; it is developed in an organism already debilitated, and in bone which has already undergone a fatty change; the classical fungous caries belongs to this class.

(3) Acute tubercular osteitis, which is analogous to acute caseous pneumonia.

Before referring to the therapeutical indications, the authors call attention to the importance of distinguishing between these different forms. As a general rule, they say, primary chronic tubercle of bone is curable by partial operations, such as extraction of the sequestra and scraping the bone. In that form which develops in persons already debilitated, and assumes a rapid course, more radical operations are required to give relief. In such cases, extensive resections, or even amputation of the limb, may be required.

The Anæsthetic and Diuretic Action of the Stigmata of Maize. (By Dr. Ducasse, *Le Progrès Médical*, December 16th, 1882.) Attention was first called to the article in question in 1879, but Dr. Ducasse thinks its properties have not been fully appreciated by the profession. He claims that no other agent is so useful in quieting the pains of chronic cystitis and nephritic colic. In the latter affection, when morphia does not relieve the pain entirely, the stigmata of maize will be found of great service. By increasing the flow of water, also, it tends to wash out the offending gravel, and thus help to give complete relief. In acute cystitis it does no good; but in the chronic form it is highly serviceable.

As to its diuretic action, which has frequently been denied, M. Ducasse subscribes to the conclusions of M. Landrieux, viz.:

1. Not only do the different preparations of the stigmata of maize modify favorably the secretions of the urinary organs, but they unquestionably have a diuretic effect.

2. The diuresis is obtained quite rapidly, and in the course of three or four hours the augmentation is considerable.

3. The effects are not only observable in affections of the urinary organs, but also in disturbances of the circulatory apparatus.

4. The pulse is made regular; the tension in the arteries is increased, while that in the veins is diminished.

5. The remedy exerts no action on the nervous or digestive systems.

6. The medicine can be administered for a long time without inconvenience.

Resection of the Inferior Maxilla.—At a recent meeting of the Société de Chirurgie, a discussion took place as to the difficulties of this operation, and the best means of avoiding them.

M. Despres opened the discussion by referring to the liability of the tongue to fall back over the upper end of the larynx or pharynx after removal of part of the inferior maxilla. In a case on which he operated recently, he endeavored to avoid this trouble in the following way: He first divided the soft parts with the galvano-caustic; he then passed across the mouth a piece of small iron wire, which was fastened to the jaw-bone on each side; a silk thread was then passed through the tongue and fastened to this wire. The patient was fed with a sound which did not extend below the upper part of the œsophagus. The cure progressed so rapidly that the piece of iron wire was removed on the fourth day.

M. Berger had tried leaving the sound in position in some of his patients who had undergone the operation, but the plan did not answer well.

M. Verneuil said he had long been trying to find some satisfactory means of preventing the tongue from falling over the larynx, and he had adopted a plan very similar to that of M. Despres, except that he used a gum-elastic tube passed through the base of the tongue instead of a silk thread. One of his internes had proposed a soft-rubber tube in place of the ordinary œsophageal tube, and stated that it could readily be tolerated for thirty or forty days.

M. Pozzi said he had seen such a sound cause pain after being allowed to remain twenty-four hours.

M. Trelat said that certain patients could stand the continual presence of the sound, but ordinarily it was better to insert it only when necessary to administer nourishment.

M. Despres thought the sound should never be left in.

The Tri-chlorated Phenol as a Disinfectant in Gangrenous and Foul-Smelling Wounds and Ulcers.—(Dianin, *St. Petersburg. Med. Wochenschr.*, No. 38, 1882.) The author of this paper stated that the compound which he describes under the above name is made of mixing carbolic acid and chloride of lime. He summarizes its properties and clinical uses as follows:

(1) Tri-chlorated phenol is twenty-five times more powerful as a disinfectant than carbolic acid.

(2) Even very small quantities prevent fermentation entirely.

(3) It is a very powerful antiseptic—more powerful, indeed, than any of those in common use at present, such as the permanganates, solutions of chloride of calcium, carbolic acid, thymol, salicylic acid and boracic acid.

(4) It is not only a powerful disinfectant, but it destroys evil odors as well; the peculiar odor of the compound itself can be masked by mixing it with oil of lavender (five drops to the grain).

(5) When applied in substance to a wound or ulcer, it is slightly irritating, but the solution has no irritating properties.

(6) It is undoubtedly useful in the treatment of soft chancre, and in diphtheria.

(7) The salts of tri-chlorated phenol possess the same disinfectant properties that the phenol itself does, and its soda salt is free from odor.

(8) The lime salt of tri-chlorated phenol is cheaper than carbolic acid.

[I have seen a mixture of carbolic acid and chloride of lime used as a disinfectant very frequently in California. The fumes generated when the acid is poured on the chloride of lime are most penetrating and disagreeable, and evidently contain a considerable quantity of chlorine; but whether the mixture is a reliable disinfectant is a matter of great doubt. The committee appointed by the National Board of Health, it will be remembered, placed carbolic acid very low in the list of disinfectants. Disinfection was practised in the cases where I saw this used to destroy the germs of scarlet fever and diphtheria.—W. C. D.]

Local Treatment of Diphtheria with Iodoform.—*Deutsch Med. Wochenschrift*, No. 36, 1882. Dr. S. Korach raises his voice in behalf of the use of that panacea of the present day, iodoform, in the treatment of diphtheria. Since July, 1881, he states that all cases of diphtheria which has entered the hospital in Cologne with which he is connected, have been treated by the application of iodoform to the throat and mouth, no other local treatment being employed. The iodoform has been applied in several different ways. When he first commenced its use, it was mixed with starch, and blown into the throat with a powder blower; then the dry powder was applied with a pencil; subsequently this method was replaced by one in which a solution of iodoform in collodium (one part to ten) was painted on the throat several times a day with a camel's hair pencil; or else a solution consisting of $\frac{2}{3}$ parts of iodoform, 25 of sulphuric ether, and 5 of balsam of tolu was applied in a similar way. The results, he states, were sufficiently satisfactory to make a further trial of this mode of treatment desirable.

[This treatment, while not new, can scarcely be said to have attained its proper place as yet—opinions being still much divided as to its value.—W. C. D.]

The Treatment of Phagadenic Ulcers by Pyrogallie Acid.—At a recent meeting of the Academie de Medicine, M. Vidal read a paper on this subject. We take the following abstract from *Le Praticien*, of Jan. 8, 1883: M. Vidal states first, that pyrogallie acid has a great affinity for oxygen, "especially in the presence of an alkaline solution." It has been considered a poison, and when taken by the stomach it has caused the death of a dog; but it is not usually absorbed by the subcutaneous cellular tissue, though M. Vidal has occasionally diluted it in the urine. The preparations which he recommends are an ointment containing 20 per cent. of pyrogallie acid and a powder containing 20 parts of the acid and 80 of starch. The results obtained were very remarkable. In one case, a young man, 23 years of age, enfeebled by excesses, suffered from a phagadenic chancre on the prepuce, and two others on the abdomen. Cauterizations and iodoform had no effect, while, after three dressings with pyrogallie acid, the progress of the ulcer was arrested. M. Vidal cites other cases also which prove the rapidly favorable action of this medicament. In many cases, he commences the treatment with pyrogallie acid, and completes it with iodoform or sub-carbonate of iron, which has also given very good results in M. Vidal's hands, and also in M. Teril-

lon's. In one case it was even observed that the ulceration was arrested at these parts of the sore where the acid was applied, and was not arrested elsewhere. The medicine should not be exposed to the air, and the dressing should be changed and applications made twice a day.

From the Italian and Spanish. By WM. G. EGGLESTON, M. D.,
Hampden Sidney College, Va.

A New Method of Osteoplastic Resection of the Foot.—(*Bull. delle Scienze Mediche*.) This method, proposed by Mikulicz, consists in a resection of the inferior extremity of the leg of the astragalus, calcaneum, and of the posterior part of the cuboid and of the scaphoid, for caries of the bone. An incision is made around the astragalus, passing high up on the tendo-achilles and low down in the sole of the foot. Section of all the soft parts, opening the tibio-tarsal articulation, resecting the extremities of the tibia and fibula, then cutting off the astragalus and calcaneum, embracing the cuboid and scaphoid also. What remains of the foot is supported by the bridge of soft parts formed by the extensor tendons, vessels and nerves of the foot.

The author recommends the operation in cases of extensive caries of the articulating bones of the foot and leg, of great loss of substance of the calcaneum, and of wounds destroying the calcaneum and surrounding parts.—*Gaz. Med. di Roma*.

Atropine in Spermatorrhagia.—In a case of spermatorrhagia following typhoid fever, recorded by Nowatsched (*Schmidt's Jabebu*), which has resisted the usual remedies, a complete cure was effected in five days by atropine. A second case was cured by hypodermics of atropia in the perineal region. *Riv. Clinica di Bologna*.

Notable Case of Cure by Gelseminum.—Dr. Sierra narrates (*Diario Medico*) the following interesting case: A lady, aged 20, of nervous temperament, married, with profuse menstrual flow, with frequent manifestations of true nervousness, was attacked with a sciatica, which, on the second day, assumed alarming proportions. The lumbar, iliac and sacro-iliac joints—more especially the latter—were attacked by the affection. No alleviation was obtained by the usual remedies. Hypodermics of morphia only gave relief for a very short time. Five centigrammes of the recently-prepared extract

of gelseminum were then administered, and repeated in two hours. Fifteen minutes after the last dose, the patient was in a profound sleep. Five hours afterward, the third and last dose was given, and the patient had no return of the pain.—*Rev. di Vinc. Medicus.*

Carbolic Compresses for Erosion of Nipples.—Dr. Hausemann has published five cases showing the beneficial effects of carbolic compresses in erosions of the nipples. The strength is five per cent. Bernhardt and Eteiner sustain his views as to the superiority of this treatment over the pomades and applications in common use. It produces permanent disinfection of the fissures and early cicatrization.—*Encic. Méd. Farmacéut.*—*Rev. Méd. Chirurg.*

Perchloride of Iron in Skin Diseases.—Dr. Carsarini (*Rev. Clin. di Bologna*) gives the following results:

1. Perchloride of iron is a most efficacious remedy in purpura hæmorrhagica.

2. In the chloro-anæmia accompanying certain skin diseases—as rupia, eczema, impetigo, etc.

3. Its external use is very favorable in scrofulous and syphilitic ulcers.

4. Squamous affections are markedly modified by applications of a liniment of perchloride of iron.

5. It may be used as a lotion, dissolved in two or three parts of water, or as an ointment—one, two or three grains of perchloride of iron to thirty grains of vaseline [cosmoline] or lard. The author has used it in psoriasis, in the form of a pomade—ten grains of iron, thirty grains of lard or glycerin.—*Rev. de Vinc. Méd.*—*Rev. Méd. Quir.*

[If absorption is required, lard is the best base, vaseline [or cosmoline] next, and glycerin least readily absorbed of all the fatty bases.—TRANSLATOR.]

Ergotine in Typhoid Fever.—Experience tends to strengthen the views of the efficacy of ergotin in this disease. It keeps down the temperature, and seems to prevent protraction of the malady beyond its usual limit, if not to *lessen* the limit, as is thought by many who have given it a faithful trial.—*La Union Médica.*

Diphtheria.—Piogey, after thirty years experience, finds nothing so efficacious as equal parts of tincture of iodine and glycerin applied to the affected parts of the throat, followed by irrigation with warm water and syrup of lemon. The iodine acts as a direct disinfectant, causes the mucous glands of the pharynx to eliminate the exudation, and prevents its re-appearance. The irrigation detaches the particles of mem-

brane, and, acting as a species of massage, prevents atrophy of the diseased parts. The iodine and glycerin are applied two or three times a day; the irrigation six or eight times.
La Union Médica.

Compressed Pills for Hypodermic Injection after Solution.—Mr. Wilson thinks the various solutions for hypodermic injections inconvenient for transportation. He proposes compressed pills, in which the substance (morphia for example) is united with chloride of sodium—a substance readily soluble, and in no way interfering with the drug. This form presents the advantages of portability and exact dosage.—*Idem.*

[These *hypodermic pellets* are worthy of more attention than they are receiving. We have used them for more than a year with entire satisfaction. Morphia, morphia and atropia, atropia, apomorphia, conia, digitaline, pilocarpine, strychnia, woorari, eserine and daturia are put up in this manner, so as to be ready for hypodermic use, by L. Wolff, of Philadelphia, Pa., in various doses. They are *perfectly* soluble if the water is heated. Water for hypodermic medication should *always* be blood-warm. The vials sent out by Mr. Wolff are so small that *four* can be carried in the bottle recess of an ordinary syringe case. A half-grain pellet of morphia can be dissolved in fifteen minims of water, if put in a teaspoon, mashed, and a lighted match held under the spoon. By using this simple procedure, we have never had the least symptom of an abscess. In July last, Dr. J. D. Eggleston, of this place, gave eight or ten hypodermics of the bisulphate of quinine, simply dissolved in water and heated, with most wonderful results, and no sign of an abscess appeared in any part.—TRANSLATOR.]

Quebracho.—The experiences of Simon and Niets on the effects of *aspidosperma quebracho*, published in *La Cronica Médica*, conclude:

1. Quebracho moderates the respiratory movements; it is perhaps the digitalis of the lungs.
2. It is an efficacious remedy in dyspnœa caused by purely nervous derangement, and lesions of the respiratory and circulatory apparatus.
3. Its action is immediate, and its effects certain.
4. Its efficacy in dyspnœa of cardiac origin leads to the belief that its action is exercised not only on that portion of the nervous system presiding over the respiratory movements, but also on the innervating apparatus of the heart.
5. It appears to facilitate expectoration.

It has been used with satisfactory results in cases of pulmonary emphysema, with intense dyspnoea, valvular lesions, catarrhal bronchitis with asthma, broncho-pulmonary catarrh following cardiac disease, etc. The tincture or extract may be used:

R_x. Tinct. quebracho [$\frac{1}{10}$]..... 4 grammes

Water.....80 “

Syrup.....15 “

Mix. S.: Dessert-spoonful every four hours.

R_x. Dried extract of quebracho... 2 grammes

Water.....50 “

Syrup.....30 “

Mix. S.: Tea-spoonful every 2 or 3 hours.

[Our European *confrères* do not seem to be acquainted with the elegant American fluid extracts—a few drops of which are a dose. We would recommend that they adopt these instead of using such formulæ as the above, the only proper name for which is the inelegant term “belly-wash.” Parke, Davis & Co., of Detroit, Mich., prepare a most reliable fluid extract of quebracho.—TRANSLATOR.]

Nitrite of Amyl in the Tetanic Form of Intermittents.—In a case of intermittent fever with tetanic attacks, Larionov, after trying in vain to control the spasms, placed three drops of nitrite of amyl on a handkerchief, and held it to the patient's nose. The spasm slightly abated. Six more drops caused complete cessation of the attack and a profuse perspiration.—*Méditsinkoge Oboservie.*—*Rev. de Méd. y Cir. Prácticas.*

[Nitrite of amyl has already been used with marked success in a case of true tetanus—G. W. H. Ross, of Glasgow. See *Mich. Med. News, Quarterly Epitome.*]

Conjunctivitis Verminosa, or Ophthalmia of Shepherds.—Dr. Edward Mañez has had occasion to observe three cases of inflammation of the oculo-palpebral conjunctiva, due to the presence of larvæ of the *musca carnaria*. The three subjects, all shepherds, had a sensation of *something moving in the eye*, followed in a short time by the symptoms of the disease, great pain in the bottom of the superior oculo-palpebral sac, and a feeling as though the worms were moving around, which produced lancinating pains; epiphora, agglutination of the lashes, œdema of the lids and injected conjunctivæ were also noted. On everting the lid, the white larvæ were seen very numerous, and endowed with rapid motion. Essential oil of juniper instilled into the eye cured the cases.—*Rev. de Méd. y Cir. Prácticas.*

Explosive Mixtures of Medicines.—(*Seminario Farmacéutico.*)

1. Hypophosphite of lime, chlorate of potash and sulphate of iron, mixed in equal proportions, are explosive.

2. A solution of one part of chromic acid and two of glycerin.

3. Chlorate of potash and dental powders containing carbon explode in the mouth.

4. A pilular mass containing permanganate of potash mixed with vegetable extracts and iron, easily inflames.

5. Chlorate of potash or the permanganate or other explosive substances must not be triturated with glycerin.—*Rev. de Cienc. Méd.*—*Rev. Méd. Quirurgical.*

[Chlorate of potash and tannin explode if triturated; as do chlorate of potash and sugar. Iodine or an iodide and a nitrate may explode.]

Epilepsy.—Kunze recommends curare, and is supported by Edlefren, who has tried bromides alone and associated with atropia with not very satisfactory results. The formula given is:

R_x. Curare.....50 centig.
 Distilled water..... 5 grammes.
 Hydrochloric acid... 1 gtt.

Mix. S. For hypodermic injection.

—*El Genio Méd. Quir.*

[The above formula must be a mistake. In it six minims (about) represents one grain of curare, and a fourth of a grain of curare is a large dose to commence with in anything except tetanus. It would be better to use the hypodermic pellets, which are easily soluble and exact.—TRANSLATOR.]

Emulsion of Iodoform for Intra-Parenchymatous Injection.—

R_x. Iodoform.....50 grammes, triturated in
 Glycerin.....40 grammes.
 Distilled water.....20 grammes.
 Gum tragacanth.....0.30 grammes.

Mix. Make an emulsion.

[The strength of the above is about gr. ix—f3v.—TRANS.]

Citrate of Iron Hypodermically.—Dr. Ciaramelli (*La Sperimentale*) claims to have obtained good results from the hypodermic use of ammonio-citrate of iron in anæmia. He reports only one case, but this is well analyzed, and while it is not enough to serve as the basis of conclusions, it indicates a line of research of great value.

Book Notices, &c.

Diseases of the Liver, with and without Jaundice, with the Special Application of Physiological Chemistry to their Diagnosis and Treatment. By GEORGE HARLEY, M. D., F. R. S., etc.; Fellow of the Royal College of Physicians; Corresponding Member of the Academy of Sciences of Bavaria, of the Academy of Medicine of Madrid, and of several Continental Medical Societies; formerly President of the Parisian Medical Society; Physician to University College Hospital, and Professor in University College. Illustrated with Colored Plates and Wood Engravings. 1882. P. Blakiston, Son & Co. Philadelphia. Pp. 751. Price, cloth, \$5; leather, \$6.

The medical profession, both in England and America, has, for some time, been on the *qui vive* for this new work on the liver, both because hepatic literature is meagre in the extreme, and because it was well known that Prof. Harley was specially qualified to write an authoritative work on the subject. He tells us at the outset that his work is based on physiological chemistry. Though our knowledge of the physiology and chemistry of the liver is at present very incomplete, yet it must be apparent that this is the key to a proper understanding of the hepatic functions, and consequently of hepatic diseases. This is so patent that any attempt to prove it would be a waste of time.

The author considers the liver as an organ performing four functions: 1. A sugar manufacturing. 2. A fat modifying. 3. A calorifying; and 4. A bile forming function. All physiologists admit these as the four functions of the liver. Passing, then, over these subjects, and over his discussion of the bile—its nature, constituents, its secretions, composition, use and action—we come to the subject of jaundice. The author says: "I make use of the word jaundice as if I regarded the pathological condition it indicates as being an actual disease. It is only in its mode of employment and nothing more. For * * I look upon jaundice in precisely the same light as I do the terms oxaluria and albuminuria, which are not of themselves diseases, but only the most prominent and most characteristic symptoms of several widely differing pathological conditions." He speaks of jaundice as a disease, "because it is commonly spoken of in books as such, and because although the condition of the skin called jaundice be merely a manifestation of morbid action, and one, too, requiring neither skill nor experience

to detect, the proper comprehension of its true mechanism is of great practical importance to the physician; for without this knowledge it is impossible for him to treat any of the severer forms of hepatic disease giving rise to it with the slightest chance of success." "Jaundice," he says, "is met with: 1. In diseases affecting the liver. 2. In diseases of the bile-ducts. 3. In affections of other organs of the body exerting an influence on biliary secretion, as (a) diseases of the nervous system; (b) of the lungs; (c) of the heart; (d) imperfect establishment of extra-uterine circulation; (e) dyspepsia; (f) torpidity of the bowels, and consequent accumulation of fæces in the transverse colon; (g) ovarian tumors; (h) pregnancy. 4. In a variety of zymotic diseases. 5. As a result of the injurious effects of certain poisons. Dr. Harley accepts the theory of jaundice propounded by Dr. Budd, of England—that it may arise in two ways: "First, by a mechanical obstruction to the passage of bile into the intestines, and the consequent re-absorption of the retained bile into the blood; and second, by a suppression of the biliary secretion arising from some morbid condition of the liver itself, whereby the biliary ingredients, from not being eliminated, accumulate in the circulation and stain the skin." The eminent reviewer of Legg's work believes, apparently, only in the first.* He says that experimental data negative the second. Dr. Harley gives *clinical* data which, as far as we can see, prove it; and the reviewer refers to the same case, apparently, reported by Moxon (*Trans. Path. Soc.*, London), in which the autopsy of a case of jaundice showed, after death, "the gall-bladder and bile-ducts not only empty of bile, but filled with their own white mucous secretion." The author further illustrates it by comparing it with another case of jaundice from obstruction, "where after death the gall-bladder and the bile-ducts were all filled with pure bile." In the first case (Moxon's), "the gall ducts were excessively wide; so that, on section of the liver, their contents welled up in enormous quantity. It being a white, clear fluid, was a strong contrast to the serum of the blood, which was *golden yellow*. This was a case of "simple stricture of the hepatic duct, and chronic jaundice and xanthelasma." The stricture in the hepatic duct was at the point of union of its two divisions. The colorless mucus in the gall-bladder showed that the biliary function was not only suppressed, but had been so for a considerable time before the death of

* *Amer. Jour. Med. Sci.*, Oct., 1881, pp. 500, *et seq.*

the patient. The second case quoted by the author was reported by Mr. John H. Morgan (*Path. Soc. Trans.*, volume XXVII, p. 176), and resembles Moxon's in that: 1. The jaundice was intense. 2. The ducts were dilated to such an extent that their blind extremities looked like cysts projecting from the surface of the liver; and 3. The obstruction was the result of a stricture caused by inflammatory thickening. The difference was, that in Moxon's case the ducts were filled by a clear, white mucus; in Morgan's, by dark, black, inspissated bile. We call especial attention to the fact that in Moxon's case the blood serum was of a golden-yellow color.

Dr. Harley believes that "biliverdin is nothing more nor less than oxidized hæmatin, which the liver does not form, but only extracts from the circulation during the passage of the blood through the hepatic capillaries; and he believes this view to be strengthened by the condition of the blood in Moxon's case, and thinks that the jaundice of snake-poison may be due to the transforming power the venom germs have upon the oxidation of the hæmatin; and again, as regards the jaundice of *febris icterodes* and *febris icterodus intermittens*, "if we regard them as mere disorders of the liver due to the introduction into the system of toxic agents in the shape of disease germs which cause jaundice from suppression, their comprehension becomes simple." From the facts adduced by the author, it appears that he is right in holding that jaundice may be due either to re-absorption or to suppression of the bile. Acting on the latter theory, he gives several chapters to the discussion of jaundice from suppression of the biliary secretion, which he divides into three classes: 1. Arising from enervation. 2. From disordered hepatic circulation; and 3. From absence of secreting substance. The first he regards as the most typical form of jaundice from suppression, there being no change in the hepatic tissue, "and the liver simply appears to be 'on a strike.'"

As regards the cases of jaundice in which cerebral symptoms rapidly supervene, he believes that the real origin of the morbid state is *germs*; that it is a fermentation-poisoning—alluding to the fact that "all germs have a very active respiratory function, absorbing oxygen and exhaling carbonic acid gas just as other animals do;" and "the more oxygen the germs consume the less is there left to enter into combination with and oxidize the host's tissues, and keep them up to the proper working standard." The author admits that

this is a novel theory, but believes that it is certainly approximately if not entirely true in some cases. The cerebral symptoms accompanying the *chronic* forms of jaundice from obstruction and suppression, he attributes to bilæmia. Furthermore, in cases of fevers, increased temperature is an additional cause of this nervous disorder—the heat being developed in the body by the germs' fermentation.

The author holds that "icterus neanatorum" is a spurious form of jaundice, and says that "in the morbid state to which this name is given, there does not exist one single sign or symptom of jaundice whatever, except it be the slightly yellowish tint of the skin. No high-colored or saffron urine is present. No pipe-clay stools. * * * In icterus neanotorum the skin is never yellow at the moment of birth as in the jaundice, * * * and it is not until twenty-four—often not until seventy hours after birth, that it assumes a yellowish tint." He thinks the name "chlorosis neanatorum" more proper. We do not wholly accept this view. Virchow has shown that many of these are cases of catarrhal jaundice, and Frerich's explanation accounts for many of the cases. Billard's theory, though possibly true sometimes, offers no solution which would account for jaundice, but only of the yellowness of the skin. Certainly, the cases are not those of true jaundice unless the urine and stools are characteristic. The bitter taste commonly complained of in many cases of liver disease is ascribed by the author to a surcharge of taurocholic acid in the blood. He states an important fact, not generally recognized, that urinary calculi, even those consisting of cystin and hypoxanthin, are, in a great measure, dependent on disordered hepatic function. No value is attributed to pain in the right shoulder, commonly stated to be diagnostic of hepatic disease. We never did believe in this. About one hundred pages are devoted to the subject of biliary concretions and gall-stones; and the author states that these must be carefully distinguished. "When dry a gall stone is hard and unyielding to the pressure of the fingers, even when it is of a steatomatous nature, whereas, when dry, a concretion of inspissated bile is brittle and crumbles into gritty dust under pressure of the fingers." He speaks, however, of a rare form of steatomous gall-stones, which, when first passed, are soft and pultaceous, but thinks that they are of a fatty nature, and nothing else than cholesterin in its primary stage of crystallization. He cautions against taking the specific gravity of the stones before they are dry, and also against

the foolish idea that they may be detected by washing the feces in water and expecting to find them floating. They will not float, for the specific gravity of fresh stones is about 1025. Attention is called to the fact that gall-stones and inspissated biliary concretions may exist at the same time and in the same locality—a case being quoted, recorded by Mr. Wale Hicks. Jaundice from inspissated bile is stated to be a very rare occurrence, but the symptoms produced are very similar to an attack of gall-stone obstruction. It is stated, however, that inspissated bile may block up and irritate the small bile-tubes in the parenchyma without any pain being produced; also, that *fasting* is the usual time when the spasms from inspissated bile come on. He says that gall-stones are the commonest of all the causes of jaundice, and their symptoms are frequently mistaken for those arising from entirely different forms of disease—renal calculi, cancer of the liver, etc. As to their etiology, he states that the affection is often hereditary, is more common in women and in old age, and in persons using a large amount of hydrocarbonaceous food, are more common in gouty persons, but also frequent in those of the tubercular and cancerous diathesis; that the vice in the system leading to their production may be said to lie in one of the two proximate elementary factors: (a) An excessive production of the substances composing them. (b) Their normal biliary solvents—glycocholate and taurocholate of soda habitually present in the bile—being in deficient quantity. As to their prevention, “Let the patient avoid an excess of fatty and fat-forming foods, either liquid or solid,” and special mention is made of sugar and starch. Having dieted the patient, an alkali must be given to insure a sufficient supply of glyco- and taurocholate of soda to retain the cholesterin in the fluid state, and preference is given to the carbonate of soda. Schiff prefers the choleate of soda. He does not place much faith in the solvent power of chloroform or ether, as they cannot be given in sufficient quantity. As to podophyllin, he says that it is the *bane* in *all* cases of obstructive jaundice, the antidote in a *few* cases of jaundice from suppression. The author devotes a long and very instructive chapter to the *chemistry of the excretions*, and laments the almost universal neglect of this important adjunct to medicine, which he ascribes to ignorance [and rightly.—ED.].

Want of space prevents a notice of the chapters on Abscess, Cancer, Hydatid Disease, Benign Degenerations of Hepatic Parenchyma—in which are included fatty liver,

amyloid liver, fibrous growths, and embolisms—Hepatic Ascites, and Affections of the gall-bladder and common bile-duct, all of which contain much valuable and new material. It is a question if the last chapter be not as valuable as any in the whole book. It treats of the diagnosis and prognosis of liver diseases. Few affections are more difficult of diagnosis than hepatic diseases, and in few is the diagnosis more often incorrect.

The author has unquestionably written the most valuable work on hepatic diseases that has yet appeared. Indeed, we are almost tempted to think that his practice must have been limited to this class of diseases for many years. We must confess that we have tried, and tried hard, to find some error in the work, to preclude the charge of partiality being made. The only thing, however, that we find to condemn is lack of proper condensation and unfortunate arrangement. We would suggest that, if a second edition is called for, which we think must be the case, the author will arrange it more systematically, and condense the 750 pages to 500.

W. G. E.

Compend of Anatomy—For Use in the Dissecting Room, and in Preparing for Examinations. By JOHN B. ROBERTS, A. M., M. D., Lecturer on Anatomy and on Operative Surgery, Philadelphia School of Anatomy, etc. Third edition. Philadelphia: C. C. Roberts & Co. 1882. 16mo. Pp. 198. Price not stated. (By mail from Publishers.)

This is a compend of anatomy that will prove useful to all practitioners and students getting ready for examinations by "boards of examiners." But for general usefulness to the surgeon who may be in haste, this is not exactly the book. Even outline sketches are better than nothing, if accurately drawn. The day is fast approaching when the graphic will almost entirely supply the place for all that can be illustrated in science. This tendency of the age is foreshadowed by the illustrations used in other and more popular departments of scientific literature.

Manual of Minor Surgery and Bandaging. By CHRISTOPHER HEATH, F. R. C. S., Surgeon to Univ. College Hospital, and Holme Professor of Surgery in University College, London, etc. Sixth edition. Revised and Enlarged. With 115 Illustrations. Philadelphia: Lindsay & Blakiston. 1880. 12mo. Pp. 342. (From Publishers.)

As a "hand-book" on the subjects named in the title of this work, we do not know of its equal in value to the general

practitioner. The fact that it has passed quite rapidly through six editions, shows how favorably the book has been received by those who enter practice. Dr. Heath's work is as well appreciated by the profession of America, we dare assert, as it is in his own land. In noticing former editions, we have said so much of this useful work that anything further we might say in expressing our convictions in regard to this book would have the appearance of platitude.

Contributions to Practical Gynæcology. Illustrated with 16 Wood Engravings. By S. JAMES DONALDSON, M. D., Surgeon to Gynecological Wards, Ward's Island Hospital. New York: Trow's Printing and Bookbinding Co. 1882. Paper. Pp. 134. (By mail, from J. H. Vail & Co., 21 Astor Place, New York.)

This book consists of two articles, which, in substance, were read before the New York Medico-Chirurgical Society in 1882. Part I relates to *Practical Observations upon Uterine Deflexions*; Part II refers almost entirely to *Practical Observations upon Dysmenorrhœa*. As far as Dr. Donaldson has gone in this book, he has done his work magnificently well. We almost wish he had left off the words "Contributions to," on the title page of this publication; for, in a friendly way, we intended, if we had the opportunity, to review some remarks he makes. But want of space, as well as the cautious language used by the author, prevent our committing ourselves.

Treatise on Food and Dietetics—Physiologically and Therapeutically Considered. By F. W. PAVY, M. D., F. R. S., F. R. C. P., etc. Second edition. New York: Wm. Wood & Co. 1881. 8vo. Pp. 402. (For sale by West, Johnston & Co., Richmond.)

Dr. Pavy is too eminent an authority on all that relates to the digestive apparatus not to entitle his every sentence in reference to the same to the highest respect. We are glad to state that the present volume—although the author's signature to it was made June, 1875—is still "up to the times," and is well worthy of a place in the series of "Wood's Library of Standard Medical Authors."

Physicians' Clinical Record for Hospital or Private Practice, with Memoranda for Examining Patients, Temperature, Charts, etc. Philadelphia: D. G. Brinton. 1881. 16mo. (For sale by West, Johnston & Co., Richmond.)

Except to satisfy the whimsical notion of some doctor, we

do not see the use of this book. The "Memoranda" consists of not two pages, heavily leaded, on "Examining Patients;" not two pages on "Examination of the Internal Organs;" less than a page on "Examination of the Urine;" and less than a page on the symptoms of poisoning. Then follow a number of too condensed ruled pages for name, address, age, color and disease of patient, with lines for date, pulse, respiration, temperature, other symptoms, treatment, etc. After these ruled and printed pages come a few blank leaves, then 12 folios of temperature charts, and then a very meagre alphabetical index blank. If a doctor had *only* 50 or 75 cents to spend in medical works, we would not advise him to get this book in preference to some others.

Handbook of Ophthalmic Practice. By CHAS. HIGGINS, M. D., F. R. C. S., Assistant Surgeon and Lecturer in Ophthalmic Department Guy's Hospital. Second edition. Revised. Philadelphia: P. Blakiston, Son & Co., 1882. 12mo. Pp. 116. Cloth. Price, 50c. (From Publishers.)

While there are many suggestions of practical value in this little book to every physician who knows anything of the use of the ophthalmoscope, still we cannot say that we would recommend it as preferable to some other works, of recent issue, on ophthalmic diseases. The work is too incomplete to be of more than accidental importance to the general practitioner—however useful it may prove as regards incidental points, to the ophthalmologist.

Compend of Human Physiology. By ALBERT P. BRUBAKER, M. D., Demonstrator of Physiology Jefferson Medical College, etc. Philadelphia: P. Blakiston, Son & Co. 1883. 12mo. Pp. 133. Cloth. Price, \$1. (From Publishers.)

There are many men of local reputation and of great worth not known to the world. Dr. Brubaker—although simply the *Demonstrator* of Physiology—shows such familiarity with the subjects treated of in this little volume, and states his points so appositely and succinctly, that we think he ought to be promoted at the earliest possible opportunity, and this we say without a personal acquaintance, or without having known the gentleman before. This book is intended especially for *quiz* classes, but the leading questions are really stated by assertion, and the answers given show that the author is familiar with his department of study, and with the wants of the general practitioner. This "Compend" would

be very useful to one who has to hastily review his studies—as, for instance, to secure a position in the army or navy, etc.

Pocket Therapeutics and Dose Book. By MORSE STEWART, JR., B. A., M. D. Third edition. Revised and Enlarged. Detroit, Mich.: Geo. D. Stewart & Co., 1882. 32mo. Pp. 240. Price, cloth, \$1; morocco, \$1.50. (From Publishers.)

This "*pocket* therapeutics and dose book" has received praises from all quarters, as regards the two former editions—both from journals and medical men of eminence. We have, therefore, no word of commendation that we have given in regard to the preceding editions to retract or to modify. We have only to add our endorsement in a more emphatic sense than heretofore, to the long list of those who have recommended this little pocket book. It contains, in brief, a classification and explanation of the actions of medicines; the minimum and maximum doses of medicines; the genitive endings of all medicines and preparations; index of common and pharmaceutical names; index of diseases with appropriate remedies; tables of solubilities; illustrations and examples in prescription writing; poisons—their symptoms, antidotes and treatment; incompatibilities and antagonists; useful hints to the prescriber, etc., etc.

On the Borderland—A Novel. By HARRIETTE A. KEYSER. New York: G. P. Putnam's Sons. 1882. 12mo. Pp. 249. (From Publishers.)

Without the information, one who reads this suggestive "novel" can trace on its almost every page the hand of a womanly, cautious writer, who has received instructions from a master mind. The authoress is no less than a daughter of Dr. Wm. A. Hammond, whose powers of interesting description of morbid conditions are scarcely equalled by the originality of his scientific discoveries in medicine. The "border-land" between sanity and insanity is a familiar topic with doctors. The general run of the book contains many valuable suggestions. If we were the *literary* critic, rather than the party to notice the scientific value of the work, we would say, in brief, there is a little too much stiffness—perhaps due to lack of familiarity with the language of humbler personages. B.

Medical Electricity—A Practical Treatise on the Application of Electricity to Medicine and Surgery, By ROBERTS BARTHOLOW, A. M., M. D., LL. D., Professor of Materia Medica and Therapeutics Jefferson Medical College, etc. Second edition, Enlarged and Improved. With 109 Illustrations. Philadelphia: Henry C. Lea's Son & Co. 1882. 8vo. Pp. 391. (From Publishers.)

Dr. Bartholow is said to be an excellent lecturer, as he is undoubtedly an excellent compiler. He seems to have the great gift of recalling to memory what he has read, almost repeating sentences *verbatim* without *exactly* doing so. We had a friend who resided in North Carolina (now dead) who could repeat whole pages of prose or poetry after simply being read to him distinctly—even on the running train of cars. We find in the present work mention of but few facts that we have not elsewhere seen. Still the work is a good compend of what is known on the subject of medical electricity. But the descriptions given as to the manner of applying electrical currents, and the wood-cuts which represent many of the modes, are well given and very useful. While we do not think the work is altogether original in its composition, it is nevertheless a practical book, of important value to all doctors who wish to learn, or who know anything of the value of electricity in medicine.

Nitro-Glycerin as a Remedy for Angina Pectoris. By WILLIAM MURRELL, M. D., F. R. C. P., Lecturer on Materia Medica and Therapeutics at the Westminster Hospital, etc. Detroit: George S. Davis. 1882. 12mo. Pp. 78. Cloth. Price \$1.25. (From Publisher.)

The use of the name nitro-glycerin as an agent for internal administration frightens some people, and many doctors still look upon the marvellous records of its curative value simply as a curiosity in medical literature. But we are assured that a properly prepared solution of one per cent. strength is not explosive. Even the falling of a heavy weight "from a considerable height" upon such a preparation, or hammering it for some time on an anvil, or stirring it with a red hot wire, or even with a lighted match, does not cause it to explode or inflame.

But whatever of prominence and of success we accord to Dr. Murrell for introducing nitro-glycerin as a therapeutic agent, we must award to Dr. W. A. Hammond, of America, the credit of popularizing the agent in this country. Nitro-glycerin is a valuable agent in the treatment of several so-

called nervous diseases; but the practitioner must be *cautious*, to secure the properly prepared material.

Questions on Human Anatomy. By SAMUEL O. L. POTTER, M. A., M. D., author of an "Index of Comparative Therapeutics," etc. With 63 Illustrations. Philadelphia: P. Blakiston, Son & Co. 1882. 12mo. Pp. 139. Cloth. Price \$1. (From Publishers.)

This is another of the series of "quiz compends." So far as relates to the subject in hand, both to the examiner, as a guide, and to the party to be examined as to his knowledge of anatomy, it is worthy of patronage. The questions are comprehensive in their nature, and should be answered briefly. Such a monograph as this ought to have, in our opinion, a perfect *index*.

Principles and Practice of Surgery. By JOHN ASHHURST, JR., M. D., Professor of Clinical Surgery, University of Pennsylvania, etc. Third edition. Enlarged and Thoroughly Revised. With 555 Illustrations. Philadelphia: Henry C. Lea's Son & Co. 1882. Half Russia. 8vo. Pp. 1064. (For sale by Messrs. West, Johnston & Co., Richmond.)

The fact that a third edition has been so soon called for indicates the popularity of Dr. Ashhurst's work. Indeed, his energy must be untiring; for at the same time that he was making the revisions and many additions to be found in this volume, he has been, at the same time, engaged as editor of the *International Encyclopædia of Surgery*—to be completed in six volumes—one of which has already been issued. Dr. Ashhurst, too, is known to be a practitioner of extensive surgical practice, and has a constantly pressing demand upon his time in other professional as well as professorial ways. His present book is a good one, and deserves more popularity than either of the former editions. As its size and consequent cost is less, it is not as complete on all subjects as some works of larger size and greater cost. The diagnosis and treatment of abdominal surgical diseases and injuries, for instance, do not receive that full consideration which the demand of the day calls for. Battey's operation, for example, is being undertaken by country doctors whose libraries are, as a rule, exceedingly diminutive. Nothing like a satisfactory description is given of either the occasions requiring the operation, nor of the mode of performing it. We recall no reference to the plan proposed by Dr. Hunter Mc Guire, approved by such surgeons as Sayre, Gross, Sims and others, for treating penetrating wounds of the belly, namely "drainage" from the most dependent portion—secured by

"counter puncture." In other words, our criticisms amount to this: approved specific operations ought to be described in detail; worthy approved principles ought to be enunciated in a work that professes to teach the *practice* and *principles* of any department of scientific study.

System of Surgery—Pathological, Diagnostic, Therapeutic and Operative. By SAMUEL D. GROSS, M. D., LL. D., D. C. L., Oxon, LL. D., Cantab., Emeritus Professor of Surgery in Jefferson Medical College, etc. Illustrated by upwards of 1600 Engravings. Sixth edition. Thoroughly Revised and greatly Improved. In two Volumes. Philadelphia: Henry C. Lea's Son & Co., 1882. 8vo. Pp. Vol. I, 1194; Vol. II, 1174. Half Russia binding. (For sale by Messrs. West, Johnston & Co., Richmond.)

This edition of the work by the worthy "Nestor of American surgery" is an improvement on the former editions—due to careful revision by the author in keeping up with the rapid advances which have been made especially in the line of surgery during the past twelve or fifteen years. The plan of the work is chiefly practical rather than theoretical, with the endeavor to treat of all conditions for which one would consult a surgical book. In this respect, the *system of surgery* just issued is encyclopædic; but some of the articles are compiled by men of little experience and less judgment. Dr. Gross' work represents chiefly the results of his personal experience and observation in regard to surgical matters—now extending over a period of fifty years. With a mind of extraordinary grasp, which he has cultivated by long years of continuous study, his judgment in surgical matters has grown to be as perfect as can be found in living man. Every page of either of the volumes bears the impress of the writings of a careful, studious, judicious and conscientious practitioner. It would be idle even to attempt a review of the work in the short space at our command. The value of his advice to every practitioner of surgery is so thoroughly recognized by each one of our readers that we feel we have accomplished our purpose and satisfied the want of our subscribers by simply announcing that the sixth edition of Dr. Gross' *System of Surgery* is just published in a handsome style.

Lacerations of the Female Perineum, and Vesico-Vaginal Fistulæ—their History and Treatment. By D. HAYES AGNEW, M. D., Professor of Surgery University of Pennsylvania, etc. Philadelphia: P. Blakiston, Son & Co. 1882. Paper. 8vo. Pp. 141. Price 75 cents. (By mail.)

We have examined this work with something more than

ordinary interest—both on account of the importance of the subject and the eminence of the author as a surgeon. Details are given of the modes of operating by several prominent surgeons, such as those adopted by the immortalized Marion Sims, the distinguished Bozeman, the lamented J. Y. Simpson, “J. Hunter McGuire, formerly of Philadelphia,” the most renowned *general* surgeon in the Southern States—the world-famed Dr. Robert Battey, and others. While the author begins, in describing his own method of operating, by claiming “nothing original,” the careful reader of the book will recognize that Dr. Agnew has been a close student; and hence has been successful in devising a valuable method or plan. Our want of space does not allow us room to describe the operations, as advised by the several authors mentioned. But outside of this matter, we may safely assert, without fear of contradiction, that the present unpretentious, cheap, paper-back book, is one of the most valuable additions to the literature of female perineal lacerations that we have ever seen.

Editorial.

Listerine.—Special attention should be called again to this valuable agent. It is useful in surgical operations and their after-treatment; it is of equal value in obstetrical practice, and in the treatment and prevention of infectious diseases. The editor of the *Monthly* has used listerine many times; and is prepared to confirm, from experience, almost every word of the communication from Dr. E. R. Palmer, Professor of Physiology and Physical Diagnosis of the University of Louisville, Ky., published in the *Mississippi Valley Medical Monthly*. He says: “I have used listerine daily since its first introduction, and would not be without it. I have given it internally in various gastric and intestinal disorders, notably those accompanied by fermentation and flatulence, and diarrhoea, when the stools are inclined to be of a foaming nature, finding that even 15 or 20 drop doses will suffice, but oftentimes employ larger doses to advantage, with decidedly beneficial results. As an external agent I cannot speak too highly of its usefulness. I order it for mouth-washes and gargles, for vaginal and urethral applications, and as a dressing for various ulcers, such as tertiary syphilides, chancroids, herpes præputialis, etc. In such cases its action is all that

could be desired. It may be used full strength, owing to its non-irritant properties, but in most cases will do its work quite as well diluted. Its pleasant odor, unobjectionable taste, and absence of staining properties, still further commend it as a desirable remedy."

Personal Items.—We regret to announce that *Dr. James B. McCaw*, Dean of the Faculty of the Medical College of Virginia, has been ill for some weeks. But, in the same breath, we are glad to say that we hear he is rapidly recovering from a pneumonic attack.—*Dr. Robert T. Coleman*, Professor of Obstetrics, etc., in the Medical College of Virginia, we regret to learn, as we go to press, has been so overcome by professional overwork, that he has deemed it best "to go South." One who sees him daily, riding about the streets of this city in his double team, would not presume he needed the recreation he seeks, or has sought at this season of the year.—*Dr. Wm. G. Eggleston*, of Hampden Sidney College, Va., has, in rapid succession, received too many promising offers. He is a doctor of great excellence. He has not decided whether or not he will remove to Chicago, or to Philadelphia, or to Richmond, or stay at his country home. We would be sorry to lose *Dr. Eggleston* from our State, but a "prophet is not without honor, *save* in his own country."—*Dr. Hunter McGuire* has dissolved his relationship with the "Retreat for the Sick." Who else in our midst can draw patronage from abroad for such an institution? For the present, he is directing his out-of-town patients to go to several of the boarding houses nearest his residence. Merely from a sense of local policy, with such an eminent surgeon of world-wide fame in our community, we, as *Richmonders*—if possible to use such a word grammatically—should encourage the establishment of any surgical institute or hospital he may contemplate to organize. Who, of the South, is his superior?—*Dr. Robert Battey*, of Rome, Ga., has found himself so pressed by personal appeals for treatment in the special line of female surgery, that he has established a home or a hospital for such patients. He ought to have established such a "home" before. It is singular that so many of the *great* men of the medical profession now in the North are, in reality of Southern birth and training. Why not retain and support those who are with us?—*Diphtheria* has lately been prevailing through many of the counties of this and adjacent States. Happily for us of the cities, who have so many scourges, the epidemic seems to have taken the

track of a hurricane—sweeping by apparent preference the thinly settled sections of country. How are sewer gas, foul water drains, contagion, etc., to account for this epidemic? —*The recent misfortune at the Western (Virginia) Lunatic Asylum*, at Staunton, is greatly to be deplored. Five patients, after taking their medicines, almost suddenly died. The ordinary tests for prussic acid and some other quickly fatal agents were applied, but without a successful solution of the trouble. The Superintendent (Dr. Robert S. Hamilton) as well as his Assistant Physicians are exonerated from personal or official blame. The druggist of the Asylum is also relieved from any responsibility. The theory is that some one or more of the insane in the Asylum put some poison in the eight mugs in which the medicines were placed, but in *irregular* quantities; so that, while all eight were suddenly seized with serious symptoms we have not yet seen, nor heard, described, five died within three hours and one at a later hour. The autopsies of those who died within an hour or two after taking the medicine showed but slight congestion of the coats of the stomach, with no other lesion. Autopsies of those who died later revealed greater congestion of the coats of the stomach. Dr. J. W. Mallet, Professor of Chemistry at the University of Virginia—a chemist of eminent reputation throughout the country—was telegraphed to attend at once. He has taken the stomachs, etc., back to the University, where an amply prepared laboratory will enable him to make a thorough examination, and at least detect the nature of the poison. Of course he followed all juridical rules.

Apology.—The absence of the editor from this city has much delayed the issue of this number. He is especially sorry of this delay because the *Index* of the *Transactions* of the late session of the *Medical Society of Virginia* was not ready for the press on issue of the January number, 1883. Sometimes we have to make apologies, and we have often-times thought it better to say that the editor was absent than to assert that the printer had charge of affairs. The promised *Index* will certainly appear in the March number.

Our Book-Notice Department has been more than overcrowded in this issue. We have had no room for "Analyses, Selections, etc.," but we promise that our March number will contain some; and that, with the beginning of the *tenth* annual volume of this journal, April, 1883 every number thereafter will appear "on time."

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Original Communications.

ART. I.—**The Phosphates.** By WILLIAM B. GRAY, M. D., Richmond, Va. (Read before the Richmond Academy of Medicine, January 15, 1883.)

It has been said, and not inaptly, it seems to me, that “phosphorus is life.” However this may be, without it in the human organism there is death.

Physiologists tell us that phosphorus and the phosphates are found in every part of the body. Of the fluids, they are especially abundant in the blood, the seminal secretion, and the urine: of the solids, in the brain, nervous system, and bones.

The Blood, by drying and incineration, is found to contain between two and three parts of the tribasic phosphate of soda, phosphates of lime and magnesia, and a little phosphate of iron.

The seminal fluid consists almost entirely of the muriates and phosphates—the latter largely preponderating.

The Urine, as we might expect, being the chief eliminative channel, also exhibits a goodly number of the phosphates. Of these there are two classes—the earthy and the alkaline.

The *earthy* phosphates are phosphates of lime and magnesia, and are contained in small quantity in the urine. It is not surprising that authors differ very much as to their normal quantity in this fluid, some estimating fifty, while others

make the quantity of urine voided* in twenty-four hours eighty-one ounces. There are so many modifying influences and agents that these discrepancies, as they appear at first sight, upon a moment of thought will be readily accounted for. Consider, for example, the temperature of the air and the amount of moisture in it, the state of the skin and mucous surfaces, the character of the food, the character and quantity of the fluids drunk, the conditions of the mind, the functions of respiration and circulation, etc. All these influence and modify, even in healthy subjects, often in a great degree, the amount excreted in a given time. It appears to me that a fair average, striking a mean figure between the several authorities, of the earthy phosphates contained in the urine in twenty-four hours, might be stated at fourteen grains, assuming that between forty and fifty ounces of urine in twenty-four ounces would be something like a reasonable estimate.

The alkaline phosphates form the chief bulk of the phosphates found in urine. They are almost wholly made up of acid phosphate of soda, with a trace, perhaps, of phosphate of potash. Breed estimates the quantity excreted in twenty-four hours at about sixty-one grains, while Neubauer puts it at about thirty grains. Taking the mean between these two authorities, we put it in round numbers at forty-five grains.

The aggregate of the phosphates, then, found in the urine in health may be stated to be about an average of fifty-nine grains.

According to the best authorities, the *brain* of an adult contains from eight to eighteen parts of phosphorus in a thousand of the whole mass, or $\frac{1}{20}$ to $\frac{1}{30}$ of the whole solid matter thereof.

The *nerves*† are said to consist of 1.80 parts in the thousand in the healthy human adult.

The bones are known to be rich in phosphates, though a precise quantity cannot be put down, from the well-known fact that the amount varies with the age of the individual,

* Prout puts it at 35 ounces, Bocker 81, Beale 20 to 60.

† L'Heritier.

in different bones in different parts of the same skeleton, &c.

It may be proper to remark here that in the foregoing, as well as in what shall follow, only the healthy human adult is referred to.

Natural Sources of Supply.—Diet is the chief source of supply of the phosphates. After animal diet, the phosphates are increased (especially the earthy): by vegetable food they are less increased. Mosler makes the increase about one-fifth after a meal, of both alkaline and earthy phosphates. Phosphates abound in milk, cereals, certain plants, fish, oysters, eggs, beans, peas, etc. Beale puts the aggregate sum of the alkaline phosphates furnished by—

14 ounces of bread.....	53.2	grains.
12 ounces of beef.....	40.7	“
$\frac{1}{2}$ pound of potatoes.	11.0	“
$\frac{1}{2}$ pint of milk.....	32.0	“
Total.....	136.9	“

By the addition of starch, alcohol, beer, or tea to the regular diet, the phosphates are lessened. The same is true of coffee.* In the case of tea, Hammond found a diminution of eighteen grains: in coffee the diminution is affirmed by Bocker and Lehman, but not sustained by the first-quoted authority.

Besides diet, we have quite a catalogue of medicines that increase the quantity of the phosphates. It is enough to mention the more prominent of the class. Phosphorus and phosphoric acid stand at the head of the list, at least theoretically. Next come the salts of the phosphates and hypophosphites. A concentrated tincture of the wild oat (*avena sativa*), prepared by B. Keith & Co., of New York, adds a new and much-prized supplement to our list. I have used this drug, and can bear merited testimony to its real value.

The office of the phosphates in man is as boundless as their presence is universal. When we remember that the cerebrospinal system is the *fons et origo vitæ*, and that phosphorus with these is a *sine qua non*, then we begin to see the vast-

* Bocker and Hammond.

ness and indispensability of the great factor to the maintenance and existence of the entire building of animation. If the corner-stone be knocked out, how shall the edifice stand? If the power that moves the driving-wheel of life be withdrawn, how shall the dependent machinery survive? Such is the office of phosphorus to man.

Up to this time we have confined our paper to the consideration of our subject only from the standpoint of health, and uninfluenced by causes that materially modify and influence the phosphates. We now propose to consider some of these causes as well in the healthy as in a diseased state.

Effect of Exercise.—As the disintegration of the muscular tissue is measured by the amount of urea found in the urine, so does the amount of phosphatic deposits tell us of the unusual waste of nervous and cerebral matter. The muscles being rich in phosphates, we would expect to find that

Bodily exercise adds largely to the quantity of phosphates found in the urine (of the alkaline class, more especially—Lehmann).

Sleep.—The diminished activity of the nervous and muscular systems during sleep will abundantly account for a diminution of the phosphates under such circumstances. Bocker demonstrated these facts by experiment.

Mental Exertion.—Mosler found that the hourly excretion was greatest when the mind was most active, and that the earthy preponderated over the alkaline phosphates—the rate of increase of both being one-half more than the usual normal quantity when the mind was comparatively at rest. It has been my privilege to examine the urine of clergymen and lawyers frequently in reference to the waste we are considering. I am very sure that in the case of the clergy, in particular, Mosler was rather under than over the relative increase of the phosphates excreted. It has been my usual experience to find the amount somewhere between 25 and 35 per cent. of the whole fluid tested, resorting to measurement and not to weight in order to approximate the relative amount. At this time I have a distinguished member of the legal profession under my professional advice on account of dyspepsia supervening upon a general nervous breakdown,

induced by overwork at the bar, whose urine shows $1\frac{1}{4}$ grains of the phosphates to the fluid drachm, after carefully precipitating, drying thoroughly, and weighing the precipitate. Another of our best citizens—an assiduous business man—came to consult me a few weeks ago, stating his unfitness for business on account of a feeling of general prostration rather than a suffering referable to any one organ or set of organs. He stated that for months he had had all he could carry on his mind; and though of regular and exemplary habits of diet, sleep, etc., he had latterly so run down as to be no longer able to think intelligently, or take the oversight of those hired to do his bidding. His urine was found to contain $1\frac{3}{4}$ grains of the phosphates to the fluid \mathfrak{z} j.

It is interesting, just here, to remark the wonderfully expressive tendencies, inclinations, and appetites of a large number of this class of sufferers. The mind revolts at the thought of a business that but lately contributed the greatest profit and was productive of the highest pleasure at the same time. The inclination now is to rest, and often in retirement and seclusion, real and absolute. Nearly all of them want eggs, fish, oysters, and crabs, as at least a large part of their dietetics. Rest means recuperation and economy of pabulum; retirement is its prerequisite, and peculiar diet the cry of hungering nature to the rescue from impending peril. How beautiful the harmony, and how expressive! The cry of waste from the urine is responded to by the longing appetite, the starving brain, the famishing nerves.

Effect of Disease on the Phosphates.—It is much to be regretted that the investigations of authors in this large field for study have been hitherto so circumscribed and meagre. Perhaps Dr. Bence Jones has given the subject most attention.

In Meningitis the phosphates are much increased, while in *Delirium Tremens* they are remarkably decreased. In *Acute Mania* they are increased during the paroxysm, and lessened during the subsequent exhaustion. (I have examined the urine in only one case of Acute Mania, and in this instance I found the phosphates enormously increased. Daily examinations were made for a month. Convalescence progressed,

pari passu, with the diminished amount of these salts found excreted. The urine was of alkaline reaction, and the precipitate consisted chiefly of earthy phosphates.)

Dr. Bence Jones publishes some interesting analyses of the urine of patients who were subjects of delirium tremens, opium poisoning, delirium with phthisis, etc., which I here transcribe so far as our subject is concerned. His observations were made in eleven cases of delirium tremens, the extremes of which only I single out. In his third case, on the thirteenth day the urine yielded in 1,000 grains, 9.63 grains of the phosphates. Case four, tenth day, urine gave only 0.87 of a grain. In a case of opium poisoning, on the second day, he found nearly eight grains of the phosphates in the 1,000 grains of urine.

In *inflammatory diseases of nervous structures, with head symptoms*, he found in a case of inflammation of the brain, on the twelfth day, 5.14 grains of the phosphates in 1,000 grains of the fluid; and on the succeeding day (the thirteenth of the disease) 11.13 grains. In inflammation of the lungs, with tubercle and head symptoms, the urine gave at one time 7.19, and at another 6.43 to the 1,000, on the fourth and sixth days respectively. The quantity of urine voided in a day is not stated in any one of these several cases.

In *paralysis of the insane*, Beale found in one case five to six grains of the phosphates in 1,000 grains of urine; while in another case only two to four grains were procured. The former case recovered in two months; the latter could not be relieved. In a third case, in which the paroxysms were very violent, the analysis gave from two to twenty-five grains in a thousand grains of urine. Three weeks after the excitement had passed off with this patient, from three to seven grains made the sum of the phosphates in his improved condition.

Affected by Epilepsy.—We would naturally expect to find a large amount of the phosphates in the urine of epileptics. I find no exception to their increase in uncomplicated cases. A fair average of the quantity present may be stated to be about nine grains in a thousand of urine. Under another caption in this paper I stated that the phosphates were lessened in the urine by alcohol. In a case of epileptic fits in

a very intemperate patient, notwithstanding the counterpoise of alcoholism, Beale found the urine to contain 8.86 grains of the phosphates to the thousand. The relative amount of the phosphates to the other saline constituents of the urine in all these cases would be interesting in this connection but for its irrelevancy to our subject.

Affected by Chorea.—I have been unable to find any account of the phosphates in this disease by any author to whose writings I have had access. In my own practice and for my own satisfaction, I have taken the pains to examine the urine in two cases. In both a large excess of the phosphates was found present, and the patients were successfully treated in accordance with the indication to supply nerve food.

In Rickets there is a great increase in the quantity of the earthy phosphates. In a child four years old Lehmann found 7.68 grains in the urine of twenty-four hours, which is more than half the amount given for adult men by Neubauer. In three analyses, by Beale, of the urine in mollities ossium, in two the earthy equalled the alkaline phosphates, instead of being as 14 to 59.

In Diabetes Mettetus: Authors all agree that as a rule the phosphates are little if at all affected by this disease. I have examined for them in only two cases. There was no albumen in either. One was a boy of fourteen years of age, and the other a young man of twenty. In the first case only an approximate estimate was made, but it was perfectly clear that the phosphates were more than double the normal average. A careful quantitative analysis was made in the latter—the young man of twenty—and the result dried and weighed in the presence of my friends, Drs. Stover and Moore. The first analysis was made on the 4th of December, and gave gr. iss. of the phosphates. On the 15th December, after eleven days of carefully-regulated dietetic and medical treatment, a second sample was procured and tested, and weighed, after thoroughly dry, three-fourths of a grain. In each instance one drachm of this urine was the quantity subjected to analysis. (It may not be improper, here, to remark that the medicines used were sulphide of calcium, gr.

$\frac{1}{10}$, twice a day; and ext. belladonna, gr. $\frac{1}{4}$, morning and night.)

In Acute and Chronic Bright's Disease.—All the authors I have consulted agree that the phosphates found in the urine fall short of the normal amount; at the same time some of them admit that in all chronic urinary diseases, as a rule, excretion being diminished, the earthy phosphates especially "may be present in lessened, normal or increased amounts." I have not found a high specific gravity always necessary to the presence of the phosphates in great excess in the urine.

In Beale's series of urinary analyses, he reports the case of a man "aged fifty-three, suffering from slight *general paralysis, with impaired speech (slight), intellect, and memory.*" No albumen was found in his urine, which was of feebly acid reaction and of a specific gravity of 1.019. The quantity of phosphates reached the high figure of 7.68 grains. In another case (*epilepsy*) the specific gravity of the urine was 1.024, while only three to five grains of the phosphates could be precipitated.

Once more: I have already referred to an analysis of urine by Dr. Bence Jones, in a case of *delirium tremens*, in which only .37 of a grain of phosphates could be found in 1,000 grains of urine, though the specific gravity of the latter was 1.024. I have made analyses in only three cases of Bright's disease to ascertain the amount of the phosphates. The first case was that of a gentleman from New York, suffering with chronic Bright's disease, for which he had been treated by specialists at the North, and finally pronounced hopelessly ill. (He has now apparently recovered, having had no albumen in his urine since 1st September.) The specific gravity of his urine was 1.008 and contained one-half grain of the phosphates to each drachm of the fluid. The second case was that of a young lady from a distant county up the James river. The specific gravity of the urine was 1.007—reaction alkaline and phosphates largely above the normal, but not weighed. The third case was that of a distinguished gentleman residing in Chesterfield county, Va. The specific gravity of the urine was 1.008—reaction acid. The phosphates were precipitated from one drachm of urine, and

when dried and weighed gave one grain and a half. There can be not the slightest question as to the correctness of the diagnosis in either one of these three cases. The amount of albumen was large, and casts abundant with them all.

In Cholera, Parkes informs us that at first phosphoric acid is lessened, but that it gradually increases with the advance of the disease, until from the third to the sixth days it ranges from 92.64 to 138.96 grains.

The phosphates found in the urine are often (generally in some) increased in most of the *neuroses*, in *genital inertia*, especially in the male, in *pregnancy*, and in the *opium habit*. The length of this paper already admonishes me not to give each one of these a separate consideration, though much might be said on the subject.

In Tuberculosis the amount of the phosphates found in the urine varies considerably. Usually I have found them in increased quantity. It is reasonable to suppose that this increase is more marked from the period of softening to the termination of the disease; still I have found them in large quantity, even in the early incipency of the complaint. Enervation of the nervous system, dyspepsia, and mal-assimilation—the outposts of consumption, generally—would prepare us always to expect additional excretion of the phosphates. My friend Dr. Coleman kindly supplied me with a sample of urine from one of his consumptive patients early in the stage of softening. From one drachm I precipitated, dried, and weighed three-fourths of a grain of the phosphates. The urine was of acid reaction, with a specific gravity of 1.016. To Dr. Crenshaw, also, I am indebted for a sample from a patient in the last stage of the disease. The specific gravity of the urine was 1.024, and reaction strongly acid. From one drachm I precipitated, dried, and weighed one grain of the phosphates.

I must be content with merely calling your attention to the phosphates in the *debilitated*, the *aged*, the *dyspeptic*, *convalescence* from severe diseases, *injuries to the spine* by blows, *spinal paralysis*, *cystitis*, *prostatic enlargement*, *stone*, etc.

Clinical Significance of the Phosphates in Urine.—We have studied and seen the large percentage contributed by phos-

phorus to the great head-centres of life in man. In the same proportion, then, and to a corresponding extent, it is altogether legitimate to estimate the importance and magnitude of its contributions to health and life. First, I remark that an excess of phosphates in the urine is not always necessarily an indication of the measure of wear and disintegration of the organs. An excessive amount of sweet milk, particularly, drunk even by the healthy subject, often effects such an increase. Secondly, I have regarded an unusual scarcity of the phosphates as equally expressive in the diseased state as the large excess; but the former condition of things has not very often come under my observation, nor within the range of my experience. At first thought, these two apparently opposite conditions would hardly seem compatible with a sound reasoning on the subject as to augury and therapeutics. On the one hand the disintegration is rapid and excessive, while on the other there is not fuel enough to subserve the purposes of normal activities. In both cases, alike, it is clear there is an equal demand for material from without.

It is an inviting field to consider, *seriatim*, the pathology and therapeutics of the several diseases to which reference has been made; but the general character of this paper forbids my doing so. Suffice it to remark, that no matter what the disease, when the amount of phosphates excreted is much in excess of what is normal, it is a matter of no small consequence to heed the warning and take note of the waste of vital nourishment. The cases are exceedingly rare where you will fail to do your patient lasting good by supplying this waste. Their inordinate elimination means impoverishment of the nervous system. Let that be prostrated, and tell me what organ can properly perform its function? Take, for example, the gestating female and withhold from her the phosphates, so much needed and in such large quantities for the healthy and perfect development of the growing and appropriating fœtus, and you will not only ensure severe neuralgias, tooth and ear-ache, with often a loss of at least one tooth, morning sickness, &c., &c., but you will engraft upon the unborn weaknesses that will be commensurate with life

and transmitted down the generations for years and ages, perhaps, by us uncalculated and incalculable. No poisoned fountain can send forth healthy waters, no muddy pool clear and pearly streamlets, nor starving parent healthy scions. Furnish the requisite amount of the phosphates, and neuralgia, toothache, &c., will flee before the satiated appetite of the enhungered and enervated nervous system as the mark responds to the bullet's touch of the well trained and experienced marksman. If this be not compatible with a healthy and sound physiology, I confess I cannot see nor understand wherein it falls short of it. Properly apply these remedies, by which I mean *demonstrate in the test-tube* (our *only* safe guide) the call for them, and they will rarely fail you. Exceptions there may be, but they are exceptions *only*. But I must leave this part of the subject, remarking before doing so, that a correct diagnosis in reference to the demand for the phosphates is the only sure road to success in their administration.

I know of no better place than this to call the attention of the profession to *microscopic examination of the triple phosphates* as a material aid to the diagnosis of *conception*. I have seen or heard that this plan has been suggested before by some French or German student, but have not been able to find any account of it in any book or journal to which I have had access. I am aware that my friend, Dr. J. S. Wellford, has been for some time interested in the study of the phosphates generally, including this line of inquiry together with the rest.

I have ventured a diagnosis alone from the revelations of the microscope in five questionable cases, and without a single failure. One of these was a conception of about three weeks, as demonstrated by the time of delivery at term. The other four cases were diagnosed between the first and third months. I will attempt to elucidate the appearance of the triple phosphates in such cases as best I can, but it is a difficult thing to render an intelligible account of them on paper. The triple phosphates, when not altered by disease, usually consist of from four to six feathery leaflets, arranged in, and fashioned after a stellate figure. For examining the triple

phosphates in these cases, I generally precipitate them by Tyson's magnesian fluid, which is composed of one part each, aqua ammonia, muriate ammonia and sulphate magnesia, and eight parts of water. I have only made a quantitative analysis in a single case, and find in one fluid drachm of urine half ($\frac{1}{2}$) grain of the phosphates. The patient is near the fifth month of gestation. When conception occurs, or certainly during the third week thereafter, disintegration commences at the distal end of one of these segments and gradually progresses till its normal feathery character is destroyed. As yet I cannot definitely state how long a time is necessary to this end, but think it more than probable that we can attain to such a degree of accuracy. When these changes are complete upon one segment, another in turn is attacked and metamorphosed or disintegrated in the same way, and so on till the work of abnormalizing is complete. This happened during the eighth month in the only case I have investigated at so late a stage of gestation. I desire especially to caution those who may resort to this plan as an aid, at least, to the correct diagnosis of these cases, *not to regard the mere dismemberment of the stellæ* as the augury of which I speak. The crystal may be normal or abnormal as to *shape*. The material diagnostic consists in the destruction of the *normal feathery* character of the crystal. This disintegration or metamorphic change commences at the distal end of one segment at a time and travels towards the centre, or nucleus of the figure. Only one segment is attacked at a time, and not until its complete abortion is effected does the work of invasion begin upon another, in turn.

Perhaps a brief reference to a case attended by Dr. R. T. Coleman and myself may aid in illustration.

A lady who had aborted at the second month (about eighteen months ago), again suspected herself to have conceived during the past summer, the catamenia having failed to appear. The second month thereafter she was seized with uterine hæmorrhage, which was naturally regarded as the announcement of another imminent abortion. Giving her the benefit of the doubt, the case received a corresponding treatment. A second and third hæmorrhage recurred at intervals of a month in each case. I made weekly micro-

scopic examinations of the triple phosphates in the urine. Scarcely a single stellate crystal could be seen, each segment thereof being alone. Notwithstanding this thorough dismemberment, the *feathery normality* of the segments was *preserved*. The case turns out to be one of incipient menopause.

It is germane to my subject to ask the attention of the profession in connection therewith, to the important matter of misappropriating the phosphates in the modern plan,

Of Educating the Young.—We have seen that the phosphorus salts exist in nearly every part of the body, and that they are necessary to, and prominent in the development of every part of it. We have further seen that exercise of the brain and nervous system involves a large consumption of the phosphates. Now, nature has wisely appointed a time in which physical man and womanhood must be developed, or developed not at all. That time embraces mainly the period from birth to puberty. Think of what is to be accomplished now, and what is needful to its accomplishment, and I am sure you will see and admit that every energy, every vital force will be requisite to the building of a fit temple for the indwelling of the true man and woman. No division of forces can now be afforded. The time for the completion of the edifice is comparatively short, and the laborers must not be diverted into other channels, nor the raw material misappropriated for other uses. The laws that influence, and govern, and regulate matter in the universe, are not more natural than those which operate to incline a boy to such sports, pleasures and entertainments as tend to develop, expand and mature a strong, hardy and healthy physique. He cares not for Arcturus, nor Mars, nor Jupiter, nor the lesser satellites—nor for letters. He is busy building a house—a comfortable house for his manhood to live in, and in accordance with what is perfectly natural, for it is nature's finger that points him the way, just as she gives expression by hunger, thirst, etc., of the wants of the body. The children of the present day are put to school, certainly by the time they are seven years of age. From that time till they have attained to fifteen years of age, about three-

fourths of the time are claimed for educational purposes, leaving the pittance of one-fourth to the body, and that too at a time when it is to be matured, or at least to evolve its "ground plan." Well, during this period of seven or eight years, they are to have from five to eleven studies a day. (This I have ascertained by careful inquiry among the schools.) With the nutrition thus diverted from the body, how can it be otherwise than frail and unhealthy, as we are accustomed to find it among the better classes of society? What better key do we want to epilepsy, chorea, nervous prostration, dyspepsia, delayed and obstructed natural functions? How often do we meet with these and other ailments of a kindred nature in the school girl or boy at from ten to fifteen years old? These ailing ones are generally children of the greatest sprightliness in the outset; but as the dew drop warps the oak, so have they been warped; and as in the one case it is forever, so in the other it is generally true. In school parlance, it is rather the "lazy and the mischievous," than the studious and attentive children who survive this educational training and make healthy men and women, with well balanced and vigorous minds. This is one of the cases

"Where ignorance is bliss," and
"Tis folly to be wise."

It seems to me a logical, natural and necessary sequence, that such a diversion from its natural channels of vital force should be attended and followed by corresponding evils and ills. Look around in your several experiences! Why do the "self-made men" shine so brilliantly and tower so high above those who have had "the early and the latter rains"? Surely, it is because, in accordance with nature's *fiat*, they first matured a healthy body, and then applied life's forces to the development and cultivation of the mind, in its proper order. If the bending of the young twig determine the incline of the matured tree, is it strange or anomalous that a famishing body, bereft of support, should forever fail of a normal development? And again, a child can as readily walk before its bones have appropriated a sufficient quantity of lime to give them a strength adequate to the support of

the superincumbent weight of the body, as a young brain tolerate and carry the burdens popularly imposed upon it before its time. If one proposition be true, the other, in turn, must follow. I fancy the vital forces are precisely those necessary to the work they are to perform. It is clear, their first work is corporeal, and the next in order, mental. Misapply or distort, or distract them, and both chaos and failure will inevitably follow. A force adapted to the work of moving a given machinery, if diverted from it and divided between it and another mechanism, will fail to be able to run either satisfactorily. Were it possible to apply it wholly to the second mechanism, then of course the first must be ignored. Taking either horn of the dilemma, failure and subversion are the legitimate offspring of such an experiment. Do we not find it so? If phosphorus be so necessary in the parental relation to the healthy maturation of the fœtus in utero, can it be dispensed with, or diverted, during the greater developmental period of extra uterine life, to puberty? It would seem to me illogical to say so.

This is neither the time nor the place to suggest a remedy; but let me say, modestly, that it might be found in a more moderate and natural imposition upon the brain and nervous system, and a wiser and more equitable distribution of the phosphates. It is believed that a proper conformity with the physiology on the subject in this matter will hand down precious legacies to unborn generations, in longer life, better health and an intellectuality, of which the nations might well be proud.

Addendum.—Since reading the foregoing paper, I have been led to make eight analyses of the urine of pregnant women, in order to ascertain the amount of the phosphates contained therein. The result of case No. 1 is already inserted, and the plan of precipitation in all of them detailed.

In each case f. 5j of urine was subjected to analysis.

Case No. 2, in the sixth month of gestation, contained of the phosphates, one and a-half grains.

Case No. 3, in the eighth month of gestation, contained of the phosphates three fourths of a grain.

Case No. 4, in the seventh month of gestation, contained of the phosphates one grain.

Case No. 5, in eight and a half months of gestation, contained of the phosphates one and a-half grains.

Case No. 6, in the eighth month of gestation, contained of the phosphates one and a-half grains.

Case No. 7, in the fifth month of gestation, contained of the phosphates one-half grain.

Case No. 8, on the 276th day of gestation, contained of the phosphates one and a half grains.

Cases Nos. 6 and 8 are consumptives.

Case No. 7, dyspeptic and fœtus, if alive is very feeble; but believed to be still living.

I am indebted to Drs. Crenshaw, Herndon and Gordon for six of the samples examined.

ART. II.—**What the General Practitioner should know of the Throat and Nose.** By F. TIPTON, M. D., Selma, Ala.

The diseases of the larynx are not of so frequent occurrence, save in the different forms of croup in children, as the diseases hitherto described, and will occupy but little space in this article.

Every practitioner should be able to examine the larynx with mirrors, and be able to make applications; for though his cases be few, it reflects no credit upon him to have some younger man, fresh from the throat clinics, show up the details of a diseased larynx and make applications for him which often bring comfort and sometimes cure, whilst he sits by utterly incompetent to even suggest a means of relief. There is no reason why every doctor may not become a fair laryngoscopist. Once acquired, the arts are like those of swimming and dancing—easily recalled ever after.

Seat the patient before a bright light (window or Argand burner). Let him throw back the head until the upper teeth give a good view of the palate, when the mouth is opened. Put on the head mirror; throw a bright focus on the velum; gently grasp the tongue between the thumb and forefinger of the left hand and draw it forward as far as possible, with-

out hurting it on the teeth; warm the little mirror by passing it lightly over a lamp chimney until it feels warm to the cheek; then introduce it into the mouth; press it gently against the velum in a direction upwards and backwards; and, in an instant, there will be presented a most beautiful picture of the vocal apparatus. I wish every physician could see this simple and beautiful manœuvre done once just to show how simply and easily it is accomplished. If the larynx should not show well, cause the patient to pronounce a prolonged eh-h-h-h several times in slow succession, which will bring the whole apparatus into view.

The commonest form of laryngeal trouble is *transient hoarseness*, which, however, often requires treatment. Take tincture of aconite and tincture of belladonna, each, two drops, repeated every hour, with a little borax to dissolve slowly in the mouth. This will give the most prompt relief.

In the *croups of children*, Turpeth mineral is in great repute in this city as a safe and sure emetic when given in two-grain doses, repeated if necessary, with full doses of quinine when the attack recurs nightly.

Acute laryngitis in the adult, the reader will perhaps never see. Most of the slight *chronic* forms of laryngitis are caused from naso-pharyngeal catarrh, and can be cured by curing the catarrh which causes them. Graver forms are due either to syphilis or tubercular disease, and are to be treated by local applications. (See Bosworth on the *Throat*.)

When the art of making these applications is learned, it becomes a kind of fascination to make them. The whole process is visible in the mirror, and the art is soon learned. Indeed it is astonishing to find how readily it can be done. Careful study of the methods described, and a little practice on a docile patient, will make any one a fair operator. There is no need of going abroad to learn these simple procedures. A little nerve and patient determination to do their own work is all that the majority of intelligent practitioners need to accomplish many things which they fear to attempt.

The *diseases of the pharynx* most commonly met with in general practice are:—

- (1st) Acute catarrhal pharyngitis.
- (2nd) Chronic catarrhal pharyngitis.
- (3rd) Acute follicular pharyngitis.
- (4th) Chronic follicular pharyngitis.

The symptoms of *acute catarrhal pharyngitis* are too well known to require description. The proper treatment consists in beginning with a brisk mercurial cathartic—such as ten grains each of calomel and compound tincture of colocynt, to be followed with ten to twenty-drop doses of tincture of muriate of iron, and ten grains of chlorate of potash, in a little syrup of acacia and water, every two hours. The throat may be mopped twice daily with the same drugs, mixed with an equal quantity of glycerine, or, what is better still, the following prescription, which was kindly given me by Dr. W. H. Johnston, a prominent physician of this place, viz:

R. Acid tannici..... $\overline{3}$ ss
 Tinct. ferri..... $\overline{3}$ ss
 Glycerin.....
 Aquae \overline{aa} $\overline{3}$ j Misce.

This makes an ugly, black mixture, but is very efficient. In the treatment, gargles are of much service if the act be performed properly.

The usual method is wholly valueless, and does little more than add to the existing irritation. The proper method is to throw the head backwards; let the patient begin the act of swallowing, but before completing it, return the fluid he was about to swallow to the mouth. This process reaches the whole faucial surface, as can be clearly proven by painting the posterior wall of the pharynx with iodine, and gargling with starch in solution. The characteristic reaction takes place, and the fluid returned is discolored by the presence of iodide of starch.

There is no better gargle for this condition than the saturated solution of chlorate of potash, to which carbolic acid may be added in the proportion of ten drops to the ounce; or use tannin, if the parts be relaxed, in the proportion of one drachm to eight ounces of water. A brisk mercurial cathartic is always of service in all acute inflammations of the throat.

In some cases, patients find it more grateful to use the gargle hot. A favorite prescription of mine for the poor is one drachm each of salts of borax and soda, to the pint of very hot water as a gargle. Cold cloths to the neck, covered with dry towels, make the best external application in the early stages. Steaming with the atomizer, charged with sedative substances, is comforting in some cases. Morphine may be used (one grain to the ounce of water), or paregoric—one drachm to the ounce may be so used with caution.

Chronic Catarrhal Pharyngitis is exceedingly common. Indeed a distinguished laryngologist once said that, in America, he had never seen a perfectly healthy throat. In the writer's experience, this condition is almost invariably the sequence of chronic naso-pharyngeal catarrh, and requires the same kind of treatment. (See first part of this monograph.)

The solutions of the nitrate of silver should not exceed twenty grains to the ounce, and should be applied every third day until the membrane resumes its normal color. Smoking, drinking and excesses should be strictly forbidden.

Acute Follicular Catarrh of the pharynx is recognized by the swollen and congested condition of the follicles on the post-pharyngeal wall, and often by the appearance of sebaceous matter in their apices. For this, the same treatment is indicated as in follicular tonsillitis, and the results are fully as striking. Indeed, we may call iron and nitrate of silver specifics in this trouble. (See treatment of follicular tonsillitis article first of this series.) In these two affections the nitrate of silver should be used exceptionally strong—forty grains of silver to an ounce of distilled water—being the best strength. One or two applications are sufficient.

In the *chronic form of Follicular Pharyngitis*, which is easily recognized by the studded appearance of the pharyngeal wall, due to the elevated follicles, nothing short of total destruction of the follicles will give relief. This is easily done by impaling each follicle with a red-hot spear-pointed wire, or by splitting each follicle and pressing into the wound a sharpened stick of nitrate of silver.

Before leaving the consideration of diseases connected

with the pharynx, it is well to remind the reader of the possibility of *abscess* in this region, in all cases of sudden or slowly increasing suffocation. The possibility of this condition should be borne in mind, and the posterior wall of the pharynx ought to be examined, in all doubtful cases, by instruments, if required, and with the finger if necessary to detect pus, if present. Relief is prompt and striking where pus has formed, and is occluding the air passages, by incision with a long, straight blade, wrapped to within an inch of the point.

ART. III.—**Lessons from Fatal Obstetrical Cases.** By CHARLES R. CULLEN, M. D., (P. O.) Richmond, Va.

If physicians would report their unsuccessful cases, the profession would gain the benefits, and humanity would be still more the gainer. From a clear and full report of misfortunes, a clearer and better plan of treatment could be discovered, and the professed philanthropy of our noble calling would not so often be brought into disrepute. If a physician learns a better practice through his own experience, it is his duty to impart his information to members of his profession. If all doctors would act on this principle, the calling would be ennobled far more than it is at present.

From an uninterrupted practice of over twenty-five years, I propose to furnish several cases—fatal ones in my *obstetrical* practice; and if any member of the profession can see how my errors may have been avoided, it will be something gained.

(1.) About ten years since, I was called, in consultation, to a primipara with convulsions, commencing with the labor. We bled the patient freely—probably to the amount of three pints of blood—and gave her tartar emetic and cannabis Indica. We also endeavored to open the womb. The convulsions were rapid, and after the first one, consciousness never returned. The pains were strong, but the os opened very slowly. The rapid dilators had not been obtained, if known at all; and to expedite delivery, the contents of the foetal head and thorax were removed as soon as possible, which operation was followed by the removal of the body.

By the time the delivery was completed—say in twelve hours—the woman was dead.

I have often asked myself, Could any better treatment have been adopted at the time? The only improvement that I can suggest is that the rapid dilator ought to have been used. But the instrument now most in use (Barnes') could be improved by the addition of semi-lunar blades, which would not lacerate the sides of the os. A change of any thing else would hardly have stopped the convulsions. Sometimes simply turning from the back to one side, with anodyne enema and evacuants and chloroform, will aid in accomplishing this desired result; but every effort failed in this case.

(2.) A female was delivered after an easy labor, and the after-birth removed, after some trouble, apparently whole and without flooding, at the time. The womb contracted well, but in forty-eight hours flooding commenced violently, and before I could reach the place, eight miles distant, the woman was dying from loss of blood.

I see nothing in this case which is not likely to happen again, although it is the only case of the kind I ever attended.

(3.) A female, aged 37 years, had a fall one month after conception, and flooded profusely. By the use of a tampon the flooding was checked. Twenty four hours afterwards, anticipating a return, another physician was called in, and he thought it best to remove the fetus with the placental forceps, arguing that it was dead. He delivered the fetus, but without noticing fetal life. While the fetus generally dies, it has happened in my practice to survive profuse loss of blood, and I still think it best to wait and watch the case; and if flooding continues, remove the contents of the womb. The mother soon recovered her usual health.

(4.) Another case of abortion in the second month following excessive flooding. To check it I injected Monsell's solution of iron into the womb. In ten hours inflammation commenced and extended through the peritoneum. The tympanites was greater than I ever saw it in any case, and death resulted in three days. The injection was a device resorted to after trying other things; and though used before and since, that was the only fatal case from this cause in my practice.

(5.) A lady, in her fifth month, was threatened with miscarriage, which was checked without flooding; but inflam-

mation of the brain, with wild, raving mania, succeeded. Treatment consisted in blood letting, ice to the head, evacnants, *veratrum viride*, and efforts to excite uterine pains, but in vain. Death followed in two days. It is possible that if miscarriage had been complete, inflammation of the brain might have been prevented, but I still believe that my first duty was to prevent miscarriage.

(6.) A patient, at full term, had a narrow pelvis, but it was not apparent to either myself or the consulting physician. Failing to deliver with forceps, the perforator was employed, and a dead child removed; but from the labor lasting several days, puerperal fever set in which terminated her life.

In this case it is quite probable that if the child had been removed earlier by two days, puerperal fever and septicæmia might have been prevented.

(7.) A case of placenta prævia produced flooding during the seventh month, which was checked, and the flooding only returned a day or two before the regular pains. A portion of the placenta could only be reached, which was separated from the walls of the womb; and the pains being very feeble, the cold water rubber dilators were brought into requisition. These acted too slowly, and before the delivery was completed by the forceps, exhaustion beyond recovery followed the rapid loss of blood. The patient was unconscious before the labor was completed, and survived only eight hours. Neither of the attending physicians had rapid dilators, which might have prevented the sad result. A country practitioner should have all necessary instruments ready for any emergency.

(8.) A lady had floodings in several labors, and had several abortions; and though the loss of blood at different times was alarming, recovery took place till the last time. In her third month, a long ride over a rough road brought on flooding, which, at first, was slight and overlooked. From being used to flows of blood, her danger was not apparent to her mind. When called to the case, the womb was entirely closed, and both patient and physician were uncertain whether the flooding was from menorrhagia, to which she was subject, or from a partially removed placenta. The womb was dilated, and a dead and putrefied fœtus of three months was removed and a portion of the placenta—as much as could be seized with the placental forceps and the finger. The womb was injected with Monsell's solution of iron, and for over two days the patient improved. During the second

night, flooding took place, almost insensibly, without the patient being aware of it; and, when I reached the bed-side, exhaustion had nearly terminated her life. There was difficulty in discriminating between the pulsation of the artery at the wrist and the subsultus tendinum. By first washing out the womb copiously with *hot* water, and removing about half a square inch of placenta and injecting Monsell's solution of iron into the womb, and quinine (six grains) per anum, and frictions of limbs with mustard, the patient rallied. This was continued every four hours, save the iron solution. At each time a small piece of placenta was obtained. During fifteen hours, the patient drank over three pints of rich milk, and was gaining her strength. Soon after the removal of the last piece of placenta, profuse hæmorrhage set in, which was checked in a few minutes; but it was sufficient to produce death. A consulting and intelligent practitioner sustained my treatment.

The question of over-confidence of the patient in herself and in her physicians, doubtless arises to the mind of every reader. Had I a similar case to attend again, I would let the remnants of after-birth *alone*—undisturbed until flowing set in; and when it did occur, I would remove all portions of it, if I could. I would also keep the womb (not vagina) well plugged with a tampon saturated with tincture of iodine or Monsell's solution of iron. Experienced practitioners will probably continue to vary on this point. By keeping in mind the septicæmia of this patient, and her thin, impure blood, and the profuse discharge at each time, all efforts *may* have failed; but I fear by attempting to remove the last portion of the placenta within reach, unavoidably unsuccessfully, the last hæmorrhage was brought on.

These are all the fatal cases extending through a quarter of a century; and I write them to attract attention from the faculty generally. Many a mother has been removed from her interesting and helpless children by overlooking the danger, and not acting promptly when the occasion called for instant relief.

By applying the remedy at the right time, the case is terminated. *Victoria loeta, aut cita mors* to the sad memories of family and physicians in years long afterwards.

While unfortunate in the cases reported, I feel certain of

having saved many a life by applying the best treatment the profession has reached, so far as it is published in medical journals; and still more have I wasted a long life among many people who don't know, and don't care, whether the doctor knows any more than they do.

I have heard of cases where physicians left the placenta to be removed by natural efforts, and the women died. Another case where, from inertia, the child was undelivered, and being sent for, a single moment was sufficient to remove, with the forceps, a putrid infant. The next day, the mother died from septicæmia. Similar cases may be occurring all the time somewhere or other; but woe unto the man who flatters himself by thinking that he is discharging his duty to his patient and his God by such ignorance. People who claim descent from monads and monkeys may think that human responsibility ends with this life; but the *Omnipotent* will ask of every man, "Where is thy brother?"

ART. IV.—**Vaccinia.*** By R. I. HICKS, M. D., Casanova, Va.

Recent vaccinations in our midst, as well as in various sections of the country, made its discussion at one of our Spring meetings peculiarly appropriate; and though recent facts and investigations almost necessitate a re-writing of the history of vaccination, I shall not go back farther than to allude to the strikingly different estimate placed by mankind upon those who are skilled in human destruction, and those who are great in saving human life. While monuments in brass and marble attest the fame of military leaders, the man who discovered vaccination and vanquished an enemy more terrible than an "army with banners," is almost unknown; and Sir Wm. Jenner, who brought it into practical appreciation, received but small compensation for his inestimable services to mankind while living, and only a small pension for his family after his death. Would it not be more becoming in our ladies to be casting in their dona-

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tions to commemorate some such boon as was conferred upon the miserable unfortunates of their sex, like that of Marion Sims, which redeemed so many of them from loathsomeness and disgust, than to be holding fairs to erect monuments to those whose benefactions are undiscoverable?

But science is not aggressive, and does not assert itself, and it has its own reward. Amid obliquity and ridicule, it frequently works out its important results.

Such is and was the case with vaccination. It was forced to fight its way into practice; and we witness, at this very time, the existence of "anti-vaccination societies," as well as men sceptical in regard to its protective power. Now, why these prejudices? It seems quite unaccountable in the face of statistics. With the protected, two-thirds of one per cent. is the mortality; with the unprotected, the mortality rises to thirty-five per cent. in small-pox. The figures are appalling. Think for a moment of over thirty in every 100 cases of small-pox dying from the want or neglect of vaccination. This is an actual mortality, greater than that of the bloodiest charges in the fiercest battle—greater than that of Pickett's immortal charge up the heights of Gettysburg—greater than that of Iverson's Brigade against the Federals, protected as the latter were, by a rock wall on the afternoon of the first day's fight.

Silly as such prejudices are, we should not disregard them. Much may be learned from our enemies. It is our duty to see what abuse, what neglect or what abnormal result is the foundation of this opposition. On the streets of Warrenton, I recently heard one of its citizens say he would rather have small-pox than be vaccinated again. He had just recovered from one of those immense ulcers, so common this Spring in this section of the State, as the result of vaccination. These ulcers have not been confined to the point of vaccination, but have broken out in other parts of the body, and have brought upon the operators, on the part of the public, the severest censure. In some instance, less fortunate than those among us, the constitution has been so tainted as to be unable to recover from the damage. In others, loss of limb, and death itself has resulted.

Genuine vaccination is attended with no such symptoms or results. Very recently, I saw a young man who was vaccinated when a child; ulceration and eruption broke out on his arm, extending from the shoulder to the wrist. Some time after, variola broke out in the vicinity. This young person was exposed to it; he took it, and it became confluent, and narrowly escaped with his life. He was left with a stiff joint and an impaired limb from the extensive ulcerations, which extended to the bone. He informed me that his family, not only hold vaccination in contempt as a protection against small-pox, but held it in horror. In my opinion, this young man had not been vaccinated at all, but had been inoculated with spurious matter.

During the late civil war, I remember to have seen frightful ulcers following vaccinations in one of our Confederate Divisions. They were very much like those seen recently in our vicinity. By one party they were attributed to syphilitic inoculation; by others, to the scorbutic blood of the soldiers. I am satisfied that syphilis had nothing to do with it; because of the completeness of the recovery, and that, too, without the use of the syphilitic antagonistics. Nor could the cases have been due to scurvy, because strikingly similar ulcers resulted in our vicinity where the scorbutic conditions were necessarily absent.

How to explain, and how to avoid these phenomena, are important points of inquiry to us. They bring censure, and cause one of the most important elements of preventive medicine to be neglected. It will not do to put these questions aside with the remark, that it is due to his or her vim of constitution; or because this man and that one drinks, now and then, too much whiskey.

It is now an accepted fact, that the blood taint of one may be communicated to another by inoculation, and by this process, local and constitutional poison may be propagated.

Pacchistti, Professor of Medicine in the University of Turin, notes the cases of forty-six children vaccinated from a child tainted with the syphilitic poison. All were poisoned, and seven died. A competent commission, appointed for the special purpose of investigating these cases, pronounced the disease syphilis, and their report was not disputed.

It is a principle of natural history, that like begets like. When, therefore, something unlike follows, it is because it has been preceded by something different, which has escaped observation or knowledge. In this something, different occurs. This, plus the genuine vaccine lymph, furnishes the explanation of these unusual pathological phenomena. In the case of erysipelatous or syphilitic inoculation or poisoning, it is easily recognized, because these diseases express themselves by well-known symptoms. Some cutaneous diseases are communicated in the same manner. Eczematous eruptions, though not considered contagious, soon break out after vaccinations. As diseased germs propagate themselves, only careful investigation as to preceding cases will throw valuable light upon obscure cases. I believe many of the cases which have given so much trouble have been due to pus in inoculation; in other words, they were mild cases of pyæmia.

In my opinion, this poisoning is entirely compatible with true vaccinia, and may accompany, or may be communicated in the following manner:—A genuine lymph may be associated with dried pus, sticking to the detached scab. In mixing them, both the pus and vaccinia may be communicated to the subject. Both may go through their regular processes. In this event, vaccine protection would follow; but in either instance, the dried pus may be broken off and be applied or inserted. Here, a mild case of pyæmia or a pyæmic abscess would result, to the exclusion of vaccinia. Of course, such a patient would be unprotected, and if exposed to small-pox, he would take it, and vaccination would be subjected to reproach, which should attach to the careless or ignorant vaccinator.

Here, also, is to be found an explanation to the different phenomena presented by different persons vaccinated from the same scab or matter. One was inoculated with dried pus; the other, with that part of the scab which contained the genuine lymph. Therefore, it does not follow that, of two persons, vaccinated from the same scab, because one presents no abnormal indications, while the other does, the scab was not impure.

I recently vaccinated four children in the same family with bovine matter. Three took, and one failed. These three went through the regular vaccine disease, with beautiful results. I re-vaccinated the fourth child with matter from the arm of one of the three. Such an ulcer followed as alarmed the father, who sent for me in great fright, thinking his boy might lose his arm. I am afraid I was not as careful as I might have been, and that I communicated something more than vaccine, which I take to have been pus, because a carbolic wash quickly cured the arm, just as I had done in many other instances. Carbolic acid is considered destructive of pus germs. These results may, therefore, be looked upon as confirmatory of the above view. It is no uncommon thing for us to confirm our diagnosis by the results of our remedies.

With these unpleasant and abnormal results staring us in the face, the question recurs, how are they to be avoided, and how are our people to be protected against small-pox? The reply is, use vaccine which has not lost its energy and which is pure.

First, It is better to use animal than humanized matter. Of all the vaccine applications made by me this Spring, not one unpleasant result followed the bovine or animal virus. To use the quaint language of Benjamin Jesty—its discoverer—"you avoid engrafting various diseases of the human constitution, such as evil, madness lives, and many other bad humors," by cow-pox inoculation.

To insure its purity, vaccine virus must be selected by competent hands, and must have the following characteristics:—If humanized, it must be firm—with considerable density, of a mahogany color and umbilicated, or with a central depression. It is best to take it from children, subject to no scorbutic or cutaneous affection. In every instance, its natural history should be established. Thus, as is well known, when the skin has been abraded and true lymph applied, a papule makes its appearance on the third day. On the sixth, a vesicle has formed, of a bluish-white color, having a raised border and a central depression; on the eighth day, it is fully formed and distended, with a red areola surrounding it—widening two to three inches. The

skin becomes indurated, extending into the subcutaneous areolar tissue. This areola begins to fade on the tenth day, when the vesicle becomes turbid, yellowish and thick. On the fourteenth day, a mahogany-colored scab forms, which falls off about the twenty-third day. The external appearance of the scab should always be regarded.

Constitutional tendencies modify the scab. For illustration, here are two scabs. One is large and presents a scaly, eczematous appearance. The other has the proper character, preceded by an appropriate natural history. From it, you might calculate upon good results; from the former, bad. It should be condemned, and under no circumstances used.

Now, in regard to "energy," it is a well-established fact, that continued transmission is attended with a loss of potency. Careful experiments have proved that the view held by Sir Wm. Jenner is erroneous. He held that vaccine was small-pox modified by transmission through the cow, and that continuous transmission did not impair its energy, and wrought no change in its character. His error consisted in supposing that one remove was sufficient to stamp upon it a permanent quality, whereas it takes not less than five transmissions through animals to destroy the variola germs and appear as genuine vaccinia.

Variola vaccinia, of one remove, is altogether uncertain in its result. At one time, it is genuine vaccine—producing the genuine vaccinal characteristics; at another, variola germs accompany it, as well as those of varioloid. Perhaps variola itself is developed in the subject. The immature investigations of the early inquirers gave origin to the discordant opinions of the two parties of even to-day—one holding the above opinion of Jenner, and another that vaccinia was an entirely different disease.

It seems to be a settled fact, that vaccine is small-pox, modified by transmission through animals—not one however, but five at least. The additional fact is also reached, that a loss of "energy" or protective power accompanies further transmission. This is proved by the increasing mildness of the pustule, and the shortened duration of its continuance. Recent experiments, carefully conducted, seem about to establish the history of vaccination upon a settled

basis. It is to be hoped that the day is not distant when not only absolute purity can be guaranteed us, but an unfailing source of supply be established.

But not only does continuous transmission impair its energy, but constitutional changes destroy its impression upon individuals once protected by it. In other words, with many persons, it seems to wear out. It is, therefore, a safe plan to re-vaccinate after puberty, and repeat as often as variola becomes prevalent, until either four well-marked scars are obtained, which is about equal to having had variola in protective power, or until the patient shows an entire want of susceptibility to the vaccine influence.

In conclusion, I may add that vaccination is, properly, a part of public hygiene, and therefore belongs to State medicine. This matter should be placed under the control of a health officer, which, I regret to say, is an official practically unknown in Virginia. Individuals cannot remove a public nuisance, nor properly protect themselves against morbid germs. It requires organized effort. And as we pay taxes and institute government for the protection of our persons and property, all should see to it that the State shall perform its duty, as far as it can, towards stamping out small-pox. The law should require that competent and responsible persons should not only control the sources of vaccine, whether animal or humanized, but that it should be kept from ignorant and incompetent hands.

The breaking out of variola is always followed by demoralization. The recurrence of a case in a rural district, especially, is like throwing a shell into a squad of disorganized soldiers. Each seeks his own safety. Many become their own vaccinators. Impure and worthless matter is used; abnormal results occur; the disease spreads, and many are victimized while reposing in the fancied security of spurious or worthless vaccination.

ART. V.—**Glycerite of Kepheline.** By WM. TRINDER, Philadelphia.

Although not engaged in the practice of medicine, my relation to the medical profession as a druggist and pharmaceutical chemist naturally creates an interest in all that is

transpiring in the pharmaceutical and therapeutical world. In addition, numerous cases, especially of a chronic character, come personally under the observation of the druggist; hence, he has many opportunities to watch the actions of remedies in the hands of physicians. My interest in the phosphorous compounds was attested by the introduction into medical practice of the "lacto phosphate of lime and cod-liver oil" about ten years ago, through which I am, no doubt, known to many of the readers of the *Medical Monthly*.

The importance of phosphorus, as an organismal element, is fully recognized. Every work on physiology and organic and agricultural chemistry, show its value. The essay of Dr. Griscome, in the Proceedings of the American Medical Association (1864), Dr. Polk's pamphlet (1871), and Dr. Percy's essay in the Proceedings of the American Medical Association (1872), embody the best literature on the subject. Glycerite of kephaline—perhaps a misnomer—is the one of the organic phosphorous compounds which has attained the highest reputation.

The claim that the brain contains oxidizable phosphorus, was presented by Vauquillen in 1812; by Conerbe in 1834; by Polk in 1871; by Percy in 1872. Both Polk and Percy found in animal brain an alkaloidal hypophosphite, which possessed the singular property of combining with mineral and alkaline bases. By isolating the hypophosphite principle, and from it forming the neutral hypophosphites, with calcium, ammonium, magnesium, sodium and potassium, the preparation known as the "glycerite of kephaline" is formed.

The following is the composition:

R.	Hypophosphite of calcium.....	8 parts.
	Hypophosphite of magnesium.....	3 "
	Hypophosphite of sodium.....	6 "
	Hypophosphite of potassium.....	5 "
	Hypophosphite of ammonium.....	8 "
	Glycero-hypo-phosphrous acid.....	5 "
	Hypo-phosphorous acid.....	5 "
	Pure glycerin.....	60 "

Mix.

100.

This preparation is not sold under a copyright. It is prepared upon chemical principles, recognized by Drs. Percy,

Polk and others; and I cannot perceive anything unethical in its production or sale. It has been put forward like all other of Dr. Polk's formulæ, as the common property of the profession, void of all secrecy, and uncontrolled by any propriety claim. It has been extolled by one class of physicians as a powerful nutrient tonic—the most efficient remedy known to the profession in tubercular consumption, chronic pneumonia, nervous exhaustion and impaired vitality. Another class has denounced the preparation as worthless, fraudulent and entirely destitute of any trace of a hypophosphite. The truth of the latter charge is easily settled. A small quantity discolours a solution of permanganate of potassium, showing the presence of over fifteen per cent. of hypo-phosphorous acid, free and in combination. The presence of that amount of that acid declares it at once a powerful therapeutical agent—a very highly concentrated solution of hypophosphites. This no one can honestly and intelligently dispute.

But it is claimed by a few that the hypophosphites in this combination far exceed the ordinary amount of hypo-phosphites in nutrient and therapeutical value; that the ordinary kind being monobasic, and belonging to the phosphorous hydrate, which has no place in animal and plant organisms, cannot directly supply phosphorus to the system—cannot supply any deficiency of the phosphorous elements which may exist; while the hypo-phosphites which enter into the composition of the glycerite of kephaline, being tribasic, are at once appropriated to form the lithium and kephaline of the brain and nerve centres, venous blood, corpuscles, liver, pancreas and spleen. Consulting standard authorities on chemistry, I find that they all agree with Dr. Polk, that the ordinary hypo-phosphites are monobasic, but no one of them allude to tribasic hypo-phosphites. I find, however, that Dr. Percy, in his essay, *Phosphorus*, agrees with Dr. Polk that the hypo-phosphite principle is tribasic. The reasoning of the advocates of the glycerite of kephaline seems to be logical. It is further claimed, that the hypophosphites that enter into the formation of kephaline, is *vitalized*—that there is something special in the organized phosphorous compounds which give them greater nutrient and therapeutical potency than

those formed in the laboratory. This is not a novel idea; it is not the conception of either Dr. Polk or any other American; but was presented and defended by a large array of statements by Dr. Andre Sansom, in an able paper read before the Academy of Medicine of Paris, July 1865, and published in the *Gazette Medicale*, August 1865. The same doctrine has been maintained by Drs. Routh, Tilbury Fox, Polk and Percy. We all know that it was upon this hypothesis that Dr. Tilbury Fox introduced the wheat phosphates into medical practice. If the law be true as relates to the wheat phosphates, it is natural to conclude that it is equally true of the brain phosphorous compounds.

I am unable to understand why it is perfectly legitimate to use wheat phosphates, and regard it both quackish and criminal to use brain phosphates. If the authority of Tilbury Fox constitutes the difference, the argument is as puerile as it is contemptible. Clinical tests must form the basis of a sound therapeutical opinion. Drowning men catch at straws; and hopeless victims of pulmonary phthisis equally listen to the least sound of hope.

In the spring of 1879, I suffered from hæmorrhages, night-sweats, considerable emaciation, and debility. My case defied cod-liver oil and the usual tonics, and I began to regard my case with serious apprehensions. Calling the attention of Dr. Polk to my case, he gave a doubtful prognosis, and did not consider my case a proper one to test kephaline upon; but he thought this remedy offered more hope than any other he could recall. He directed me to take ten drops thrice daily, and to use no violent exercise, but keep myself as much as possible in the open air. In a few days, I realized an increase of strength, a bouyancy of feeling not felt for months, a better appetite, more perfect digestion, refreshing sleep, night-sweats ceased, and I gradually regained comfortable health. I think I can safely attribute my present condition to the efficacy of this remedy.

A year ago, a young lady, of twenty years of age, who lived about a square from my store, placed herself under Dr. Polk's care. In a short time, under his treatment, she regained her former healthy appearance, and seemed to be as

well as usual. Last June she contracted a slight bronchitis, and went to a dispensary. She rapidly run into acute phthisis and succumbed under cod-liver oil treatment. At present, however, there is too much evidence to doubt the efficacy of the hypo-phosphite treatment. The vitalized class of hypo-phosphites, such as are contained in the glycerite of kephaline, are immeasurably superior to the hypo-phosphites of the non-organismal monobasic class. In nervous exhaustion, I think it impossible to find a more sure and prompt remedy than glycerite of kephaline. If, as Jewell, Mann, Hammond, Hamilton, Mitchell, Brown-Sequard and others believe that the brain is worn out, and in an irritable condition of the nerve cells, in which the phosphorous principles of the brain are largely consumed, the natural inference is that the removal of the morbid condition will be remedied by repairing the impaired nerve tissue.

If the ordinary hypo-phosphites be employed, they may, through vital changes, be decomposed and combined with albumen and glycerine. Dr. Polk, who has carefully studied this subject, thinks that the metalloid and the monobasic hypo-phosphites are not assimilated by the tissues, but excite the nutrient and hæmatic function; and, through increased nutrition, the phosphorous compounds required in animal functions are formed from the tribasic phosphates of the food.

But whichever theory be true, the indication is the same—to rebuild and recuperate nerve tissue. Chemical results here come in, and decide the accuracy of the conclusion. The ordinary hypo-phosphites have, no doubt, been always useful in cases in which nutrition was not also at fault; but in many cases, no good accrues from the employment of the hypophosphates—either of lecithin or kephaline of the hypo-phosphites. But if they are not formed, or if they be formed, the nerve cell cannot appropriate them.

While we witness this result with the ordinary hypophosphites, it almost never attends the administration of organic phosphorous compounds.

There has already been too much evidence on this point to admit of a doubt. The value of glycerite of kephaline is well established; but decay of the intellectual faculties, ner-

vous exhaustion, and all diseases associated with deficiency of the phosphorous principles follow the avoidance of its use.

In conclusion, I will add the editorial endorsement of glycerite of kepheline by Dr. C. A. Bryce, editor of the *Southern Clinic*: "It will be found a powerful nutrient, and a remedy of great value in tubercular phthisis, loss of memory, decay of the brain powers, neuralgia, loss of virile power, sleeplessness, general vital deterioration, the various mucous fluxes, such as leucorrhœa, uterine catarrh, etc., as also in general debility of the female sex. We have obtained most excellent results from the use of this remedy. Dr. C. A. Polk, of Philadelphia, will be glad to give further information to any one who may write to him on the subject."

Correspondence.

Excerpts from Dr. I. J. M. Goss' Work on Practice, based solely upon Pathology.

Mr. Editor,—I notice in the December No., 1881, formulae for *in-growing toe-nail, sweating feet, offensive perspiration, burns and scalds, and headache*. In my "*Practice*" you will find this for *in-growing toe-nails*: Cut the nail in front, hollowing, like a half-moon, taking the round side out of the front of the nail, leaving the corners the longest; then scrape or file the top of the nail very thin in the middle. This method is a permanent cure of this trouble. The cause of this deformity is cutting the corners off shorter than the middle. Reversing the manner of cutting the nail always cures the deformity.

For *burns and scalds*, where the skin is not off, the "fire" can be quickly extracted by the application of *castor oil, olive, or sweet almond oil, and aqua ammonia*—say one part of the ammonia to eight or ten parts of castor oil; this is the best of the oils. This is superior to the old carron oil of the dispensatory.

One of the best applications to a *fresh burn or scald* is cold water. The part should be either immersed in the water, or cloths should be dipped in the cold water and applied to the

part, and frequently renewed until the heat disappears. After the part has become blistered, such applications cannot well be continued. Then the tincture of merigold, of the garden, diluted with one part of glycerin and two parts water, will heal the parts readily. And this is one of our best applications to a fresh cut, causing it to heal by the first intention, if the patient's blood is good. It is also a good application to old ulcers, especially to old irritable ulcers, causing them to granulate and heal at once.

For headache.—For ordinary headache, the tincture of belladonna, gtt. v., every three hours, has seldom failed to relieve for me. If the headache is from excess of acid in the stomach, then grs. v of the carbonate of lithia should be given three times a day, in alternation with the belladonna; and this will give relief. Females are subject to headache at their monthly periods. For this, gtt. v, of pulsatilla tincture has proven positive with me in a great many cases.

For offensive sweats of the feet or body, I would suggest a trial of Parke, Davis & Co.'s "ozonized aromatic fluid," used pure, or diluted with equal parts of water, and used three times a day by thoroughly washing the part in it. Tilden & Co.'s "iodo-bromide of calcium compound" will answer the same purpose, if continued for some time. These are powerful antiseptics, and if used thus upon the skin for a length of time, will, by absorption, correct that septic condition upon which the offensive sweats depend.

Marietta, Ga.

I. J. M. Goss, A. M., M. D.

Dear Doctor:—In the February *Monthly* you publish my report of a case, and entitle it "Case of Chorea due probably to Rheumatism and Endocarditis," whereas my case was one of rheumatism and eudocarditis, following follicular tonsillitis. The case was given as seeming to corroborate the opinion of Mr. Wm. Stewart, who maintains that the *pathogenetic properties* of the white blood-corpuscles, caused by follicular tonsillitis, predispose to chorea, rheumatism and eudocarditis. My patient did not have chorea.

Yours truly, G. TULLY VAUGHAN, M. D.

Lowesville, Va., March 2d, 1883.

[Editors are oftentimes blamed for the errors of those who *intend* to help. A friend undertook to give a heading to the report; but his error is only another proof that there is such a thing as "mistaken identity." We publish with pleasure Dr. Vaughan's card of explanation, while we regret that an oversight on our part made it proper for the Doctor's paper to be corrected.—ED.]

Original Translations.

From the German. By MOSES D. HOGE, Medical Student, Berlin, Germany.

Use of Quinine in Diseases of the Ear.—[The article here translated appeared in a recent number of the *Monatschrift für Ohrenheilkunde*, Berlin, and has attracted universal attention in Germany, both on account of its intrinsic merit and the reputation of the author—a name not unknown in America—Dr. R. Voltolini, Professor of Diseases of the Ear in the University of Breslau.]

Quinine is used in *otalgia intermittens*—a disease described first by Weber-Liel—which usually appears endemically. Quinine has also been employed in many cases of "singing" or "roaring in the ears"; and I do not recollect having heard of any benefit derived from it.

That quinine has an instant and favorable effect in *otalgia intermittens*, needs no further mention, as shown in cases cited by Weber-Liel and myself. I will confine my remarks, not so much to the *use*, as to the *abuse*, of quinine.

I may venture to say a few words about intermittent fever. I have had opportunities for observing the disease that have happened to but few physicians.

(1st.) I suffered myself, when a boy, for four years, with short interruptions, from intermittent fever—in fact as long as I lived in the locality where it raged endemically.

(2nd.) I have, as a practising physician, treated numberless cases, and different forms of intermittent fever, in North Germany, on the sea-coast of Pommern, and also in South Prussia, in Upper Silesia. It was after the frightful overflow of the Oder in 1854, that I was ordered by the German Government to travel over the whole of the submerged region around Falkenberg, once or twice weekly during the winter of 1855, because here intermittent fever was worst. After this rich experience, I must say it is a real abuse, to

use such large doses of quinine as are given by some, and a protest must be made against it in the interest of the patients as well as the physicians. I cannot find it anywhere in the history of medicine, how and when such large doses came to be given. The only explanation I can offer is, that perhaps some clinical professor, who has not observed many cases of intermittent fever, yet gives large doses; and the students (who have no judgment about such matters, because they lack experience), have done the same in their practice; and thus it has been handed down to successive generations, *who have learned nothing else but to give large doses of quinine*. One can read any time in the medical journals of the day of such abuse of quinine, so that a new terminology has been formed—"chininamaurose-chinintalebheit" (blindness and deafness from quinine). Formerly we knew nothing of such matters, but there exists already a separate department of medical literature on this subject. I have before me No. 18 (1882) of the *Vienua Med. Weekly*. In this number the following cases are described: "*Chininamaurose*."—After a large dose of quinine (10–12 grammes, taken by mistake), or medium doses quickly following one another (.6 grammes every two hours, or 5–6 grammes in one or two days), or even smaller doses taken several days continuously, great paleness, general debility, spasms of the mouth and extremities, sudden blindness and deafness, with violent ringing in the ears result. In many cases there was complete unconsciousness lasting several days, and even two weeks. The blindness and deafness were first observed only when the patient "came to himself" again. The pupils were wide and staring, but acting synergically with the accommodation movement. No trace of sensation to light was observable; otherwise, externally, there was nothing abnormal. By the ophthalmoscope, the following points were noted: almost complete deficiency of blood in the membrane of the optic nerve and of the retina; pupils white as chalk; no trace of blood-vessels to be seen on them or the retina. This state of absolute blindness may last for a week; then traces of retinal blood-vessels become visible. The acuteness of the central vision, in most cases, soon returns to the normal, in many it contracts between $\frac{20}{30}$ and $\frac{20}{100}$ (one being normal). The field of vision ever afterwards is contracted. Sensibility to light and color is at first very weak, but returns completely, although slowly, in the course of a month."

The prognosis of chininamaurose is quite good in general. The same symptoms were observed in three cases after large

doses of salicylic acid and salicylate of soda. All were completely cured.

Again; “‘*Sudden and complete blindness after large doses of quinine.*’—‘After seven doses of quinine, each 1.2 grammes, blindness occurred with inactivity of the pupils. Around the cherry-red macula, a gray retinal infiltration was seen. After sixty hours, an improvement was noticeable. After five days, the fingers could be counted, and blue and red colors distinguished. After eight days, all the colors were known by a subdued light. Vessels of the retina were contracted and the pupils were pale. After twenty-two months, complete acuteness of the central vision, with perception of color returns, but there was complete loss of periphery of the same.’”

I can remember no case of intermittent fever in which I have not succeeded with small doses (0.06–0.12 gramme, taken regularly every one or two hours till the disappearance of fever), and I have never prescribed larger doses.

That by giving such large doses the fever *may* disappear, must be confessed; but *quod fieri potest per minora, debet fieri per majora*; that one may kill a fly with a bludgeon, is not to be doubted, but he can do so by simpler means.

In other diseases (pneumonia, typhus fever, etc.), large doses are always given. I have had no experience; but I will say that, for the patient, it is no great gain if he is restored from an attack of pneumonia if on the other hand, he has become blind, or his sight extremely bad. We use other remedies not so recklessly. Opium will always remain a *remedium divinum*, and would be proved as such in practice with children; but we avoid it here on account of other bad symptoms it calls forth.

If in pneumonia or kindred diseases, large doses of quinine should moderate the fever, the question naturally arises, cannot the same result be gained in a more harmless manner, as was done in the last century? I have often observed in my life, that doctors have treated patients several years for fever and could not drive it off—not because they did not give small doses, but because they gave them in such an improper way. Quinine was prescribed for a patient; the fever left him; the doctor was contented, and the medicine was discontinued. In six or eight weeks, the fever returned; but on further use of quinine it disappeared, but the routine was repeated *ad infinitum*. Thus one can treat a fever a long time without completely driving it out of the system. But if one gives quinine for several weeks, or wine

of quinine a month after the fever has left, it will not return again. Schönbein maintains that "experience has taught that quinia salts relieve the paroxysms quicker; but light relapses follow; on the other hand quinine cures slower but surer." On that account is quinine wine recommended only as an after cure.

In an article by Dr. Kirchener, of the University of Würzburg, he speaks of like cases of poisoning from quinine ending in deafness. He, at the time, showed by experiments on animals what changes took place in the organ of hearing—especially in the labyrinth—through such poisoning, which passed into the system through hyperæmiæ. Dr. Shonbein concludes his article with the following words: "For an answer, we must use our therapeutic measures, and we cannot give up the condition that the power of hearing will get better of itself." Dr. Shonbein proposes for further explanation, put antiphlogistic, and such other means as are adapted to reducing the swelling in the cavity of the tympanum. I prefer to give up altogether large doses of quinine; then it will not be necessary to discover remedies against quinine poisoning.

Analyses, Selections, etc.

Increase of the Negro Population.—The absence of thrift, energy and management, many think, marks negro character at its best. It is certain that the contraries to these qualities had, under a long condition of servitude, been abnormally developed. Emancipation found the negro without the master's care (and, as a body, slaveholders, at least from motives of self-interest, were humane), without the customary oversight and medical attention, dependent, not self-reliant. No wonder that many of the negroes have been worse off than under their former bondage—that the burden of life has been so often excessive; that infanticide has been so often resorted to, to lessen it; and that death from want and exposure has been so exceptionally frequent. A body of four million slaves, ignorant, uncivilized, and trained in habits of dependence, suddenly set free, then invested with the ballot, and intoxicated with political power, then checked, and in many instances violently checked, by the necessary and wholesome self-assertion of the white race, that they should have increased as they have done is astonishing, and can be accounted for only by the remarkable fecundity of the African. For the future the adverse influence to population, arising from

this cause, will become less and less potent. The negro, adjusted to his surroundings, will work with more ease and effect. He is ascending from the lowest round. Education must give him increased power to accumulate; experience must improve his thrift, and, life passing under better conditions, it is reasonable to think that in subsequent decades he will add five per cent. of increase to that of the past. We put this rate at thirty-five per cent.—*Prof. E. W. Gilliam, in Popular Science Monthly for February.* [This statement of relative increase of negro over white population surprises us. We have not examined the census reports critically on this subject, but from impressions we have received from casual examinations of birth-rates as compared with death-rates, we had been led to believe that the viable birth-rate of the negro was scarcely more than equal to the death-rate; whereas, with the white race in the Southern States, at least, the birth-rate was largely in excess of the death-rate. This matter will receive future consideration through the columns of this journal.—ED.]

Hot Water in Therapeutics.—(Abstract of a paper read by Dr. Douglas Morton, Visiting Surgeon to Woman's Department, Louisville City Hospital, before the Louisville Medico-Chirurgical Society, August 4th, 1882).

"Several years ago I learned in my personal experience that no agent relieves nausea and vomiting so satisfactorily and promptly as water as hot as can be drunk. Since then, I have used it in a large number of cases, and it has been uniformly reliable. The following classification may be made of the cases in which it has been used:

- (1.) Cases in which nausea and vomiting occurred at the outset or during the course of acute febrile disease.
- (2.) Cases in which these symptoms were caused by overloading the stomach when its functions had been impaired by protracted disease.
- (3.) Cases in which they were produced by nauseous medicines (not emetics) at the time they were taken.
- (4.) Cases of acute gastritis caused by the ingestion of irritants.
- (5.) Cases in which these symptoms were purely reflex.
- (6.) Cases of chronic gastritis.
- (7.) Cases of colic in newly-born infants.
- (8.) Cases of flatulent distention of the stomach.

Among the cases of class 1 was a case of diphtheria and one of puerperal septicæmia, as well as one of tuberculosis,

in which the stress of the disease fell upon the digestive apparatus. In each of these a half-glass of hot water always gave prompt relief when every other remedy failed. The most impressive and permanent results of this remedy seem to be in cholera infantum—hot water being retained when everything else was rejected; and it would so compose the stomach that food could be given almost immediately afterward.

The nauseant medicines mentioned in 3, are often retained if given in hot water as a vehicle. When an enormous quantity of whiskey has been drunk, and the stomach will not tolerate anything else, hot water will be retained, and then food can be given.

Hot water is less satisfactory in vomiting of pregnancy, yet it is of considerable value in many cases.

In the various manifestations of indigestion—classed 6, 7 and 8—hot water is almost invariably followed by good results. In dyspepsia it may be given before each meal, as well as at other times, to cause the discharge of any undue amount of gas in the stomach by eructation. In this way it affords relief to young infants suffering from colic, and it is rarely necessary to prescribe anything else. It has been used successfully in a case of severe palpitation of the heart from dyspepsia.

The *decongestive* and hæmostatic action of hot water have been variously accounted for by gynæcologists. Dr. Pitcher, of Detroit, thought that when applied to a bleeding vessel, the immediate effect is dilatation, which sufficiently slows the current to form a clot; and constriction occurring afterwards, the clot is firmly held and the lumen of the vessel closed.

Dr. Emmet says that the direct result is relaxation of the coat and vascular turgescence; afterwards, if continued, reaction follows and contraction occurs.

Carl Richter, of Berlin, thinks "the contact of the hot water with the partially denuded inner wall of the uterus causes a slight inflammatory irritation, an œdematous transudation, and a swelling of the tissues, principally the submucous, intermuscular, and perivascular connective tissue, by which the blood-vessels become compressed and their lumina thereby occluded."

The action of hot water upon the uterine or gastric mucous membrane or upon abnormally full or bleeding vessels in any part of the body, may be readily and simply explained by a well-known physiological principle; viz, that of watch-

ing a frog's foot while a needle is drawn across without injuring the membrane. The vessels will presently contract and close, and after remaining so for a few minutes, will dilate to respond no more, or only partially, to such stimulus. With a stronger stimulus, as that of gentle heat, they will again contract, and such contraction may be lost a day or two.

Wharton Jones found that cold causes speedy constriction, quickly followed by dilatation.

Beaumont, in his observations on St. Martin, found that the ingestion of cold water was followed by blanching of the gastric mucous membrane, quickly followed by more than normal redness. Now from whatever cause nausea and vomiting may arise—from the direct contact of an irritant, or the effect of an emetic, or from reflex nervous influences, it is certain in many instances, and probable in all others, that the vaso-motor centres controlling the gastric blood supply are also influenced and gastric hyperæmia produced; and this condition being the link in the casual chain which is broken by the contact of the hot water on the gastric lining, the effect fails to follow. In flatulent distention of the stomach the muscular coat, impeded by the gaseous pressure, is excited to extraordinary work, and the gas is expelled. Patients who begin taking hot water to allay nausea, cannot only take large quantities without inconvenience, but get to liking it; and at times, when little or no water can be taken, by drinking it hot, enough can be retained to fully meet the requirements of the organism. This fact has an important bearing in therapeutics. Often in both acute and chronic diseases, the issue depends solely on the amount of work that the kidneys will do. In many diseases, the structure of these organs, though not primarily affected by the morbid process, is liable to damage secondarily. The injury may be due rather to the concentration of the urine—the small amount of water—than to the absolute amount of solids; so that the kidneys become clogged with destructive, effete matter if sufficient water fails to flow through them. But dilution of the urine is not the only good resulting from the free drinking of water. The skin is put to work and carries off a large portion of the effete matter that would otherwise have to pass through the kidneys.—(*Louisville Medical News*, August 12, 1882.)

Tracheotomy in Phthisical Ulcerative Laryngitis; Cure of Local Disease Before Death of Patient from Lung Complication.—Jos.

A. White, A. M., M. D., of Richmond, has reported a most interesting and instructive case under this heading (*Arch. Laryng.*, Vol. III, No. 3): Miss S. W., age 23, applied for treatment November 11, 1879, because of loss of voice, which began about one year before. She could speak only in a whisper, and this was fatiguing. She had an irritating cough; the naso-pharynx was inflamed and granular, with considerable secretion of mucus. Larynx congested; inter-arytenoid fold swollen, with slight reddish elevations; cords red, and did not approximate closely in phonation, nor dilate freely upon inspiration. This want of motion was more marked about the right cord. Examination of the lungs gave a negative result. Has constant pain in back, and dull headache; is habitually constipated, and suffers from irregular and painful menstruation. I put her on cod-liver oil and hypophosphites, and iron, with the use of warm stimulating inhalations; locally, tincture of iron spray, brush applications of chloride of zinc solutions, and use of electricity. Under this treatment she gradually improved, and in March, 1880, against my advice, she ceased treatment, but with her voice and general health better.

In September following, she returned to the Dispensary much worse, pallid, emaciated, with no voice, and some dyspnœa and dysphagia. Apex of right lung slightly indurated; bronchial and mucous râles all over the chest. Ulceration of right vocal cord, ventricular band, inter-arytenoid space, and over right arytenoid cartilage. The glottic aperture was quite small, possibly from tubercular infiltration of the mucosa and mechanical paralysis of the cords. Internal treatment as before. Locally, antiseptic spray for cleansing; then applications of chloride of zinc solution with brush, sometimes followed by powder of morphia and iodoform, if much pain, were used.

This treatment, with soothing inhalations, gave considerable relief, but only temporarily. The local appearances seemed to improve, but the glottic aperture became smaller and the dyspnœa greater. In November, the difficulty of breathing was so constant and alarming, that on the 28th I opened the trachea above the isthmus without anæsthesia. There was no hæmorrhage and no spasmodic cough when the opening was made. She experienced immediate relief from her distressing symptoms when the canula was inserted. It was removed, cleansed, and returned every day. Four days after the operation, I made a laryngoscopic examination, and found no glottic aperture, and the whole interior of the

larynx was bathed in a muco-purulent secretion. If the tube was closed by the finger, a struggle for breath at once took place.

I ordered tonics to be continued, with concentrated liquid diet, but could not persuade her to eat much, because of a dread of food entering the windpipe and choking her. Of this impression, I could not disabuse her mind, and I attributed her death as much to inanition as to the lung disease. I continued to make daily applications to the larynx, and was gratified to see a gradual improvement. On December 28th, she had a hæmorrhage.

January 9th, she seemed very weak; had an occasional cough, but she could breathe well with the tube closed, and her voice was much improved. The discharge from the larynx had ceased; the ulcerated surfaces had entirely healed, leaving the right cord slightly jagged and with but slight motion; the glottic opening was quite large, and the arytenoids only slightly swollen. This condition continued until her death, which occurred January 22d. A few days prior to her decease, a decided cavity at the apex of the right lung was detected, but there were not sufficient changes to account for her death.

A *post mortem* was not allowed. I am confident she would have lived much longer had she gotten over her dread of taking food.

The interesting point about this case was the fact that a perfect cure of an ulcerative phthisical laryngitis of tuberculous character, if we can trust our accepted modes of diagnosis, was the result of the tracheotomy and subsequent treatment, notwithstanding the serious nature and steady progress of the accompanying lung disease. This is an illustration of what Dr. Beverley Robinson so strongly advocated in an article in the *Archives*, September, 1880, viz., "the therapeutic value of rest in laryngeal affections."

Dr. R. then stated that ulcerative phthisical laryngitis (non-tubercular) had been cured more than once by wearing a canula, and expressed the opinion that it is in many cases a curable affection. At the time of reading that article, I found very little to warrant him in the latter assumption—the mass of authority among laryngologists being decidedly adverse to it. My own experience, it is true, had been limited; but still I had seen many cases of this kind which had almost invariably resisted all modes of treatment, slowly but surely getting worse, and even the exceptional cases, which seemed to improve, only did so for awhile. This one

case, however, altered my views, and convinced me that, under certain circumstances, the local changes in ulcerative phthisical laryngitis can be cured. The fact that my patient died does not at all controvert the belief that the laryngeal affection disappeared, nor the value of the fact. I believe that had she continued treatment in March, when she showed decided evidences of improvement, and when physical examination could detect no signs of diseased lung, she would have entirely recovered, or the progress of the disease would have been retarded or arrested. The value of tracheotomy in this case is obvious, and supports Dr. Robinson's views, reiterated in the October number of the *Archives*, "that it is certainly a palliative procedure of much value; that it may ultimately be found a direct curative means, yielding very favorable results; and that it seems indicated not to delay the operation to a late date."

I did, however, delay the operation as long as possible, because I had little faith in it as a curative means, and only resorted to it to relieve the distressing paroxysms of dyspnœa. I was therefore very much gratified by the result.

Book Notices, &c.

Manual of Gynæcology. By D. BERRY HART, M. D., F. R. C. P. E. Lecturer on Midwifery and Diseases of Women, School of Medicine, Edinburgh, etc., etc.; and A. H. BARBOUR, M. A., B. Sc., M. B., Assistant to the Professor of Midwifery, University of Edinburgh, etc., etc. Vol. I. With eight plates and one hundred and ninety-two wood cuts. New York: William Wood & Co. 1883. Pp. xiii, 313.

This, the January (1883) No. of Wood's Library, is based upon the principle that anatomy, physiology and pathology of the pelvic organs form the foundation of good clinical work. Thus, it must be very valuable to the student of gynæcology who wishes to lay a foundation which will be of permanent value to him in after life.

The excellent plates and the great number of illustrations, greatly increase the value of the book. If the second volume fulfil the promise of the first, the work will be a value addition to any library.—W. G. E.

Materia Medica and Therapeutics—Inorganic Substances.

By CHARLES D. F. PHILLIPS, M. D. Member of the College of Physicians, etc.; Late Lecturer on Materia Medica and Therapeutics at the Westminster Hospital Medical School. Edited and adapted to the U. S. Pharmacopœia by LAWRENCE JOHNSON, A. M., M. D., Lecturer on Medical Botany, Medical Department of the University of New York, etc. Vol. II. New York: William Wood & Co. 1882. Pp. vi, 340. (Per West, Johnston & Co., Richmond, Va.)

This is the May No. (1882) of Wood's Library of Standard Medical Authors, treating of the inorganic substances of the *Materia Medica*. The latest additions to our knowledge of these substances have been incorporated, and the whole work shows that the labors of the editor on the American edition have not been in vain.—W. G. E.

The Physician Himself, and What He Should Add to His Scientific Acquirements. By D. W. CATHELL, M. D., etc. Baltimore, Md. Second Edition Enlarged, Rearranged, and Divided into Chapters. Baltimore: Cushings and Baily. 1882. Pp. 208. Cloth \$1.25. (From the Author.)

This practical and very useful little book has already been noticed in this journal. We as cordially commend this second edition as we did the first. Indeed, this second edition is an improvement on the former.—W. G. E.

Manual of Hypodermic Medication. The Treatment of Diseases by the Hypodermic Method. By ROBERTS BARTHOLOW, M. A., M. D., LL. D. etc. Fourth Edition, Revised and Enlarged. Philadelphia. 1882. Pp. 365. J. B. Lippincott & Co. (For sale by West, Johnston & Co. Richmond, Va.)

This edition is not a mere reprint of any former edition. We cannot say more than has been said, that this is the best work on the subject in any language. It may be regarded as authoritative.
W. G. E.

Asthma: Its Pathology and Treatment. By HENRY HYDE SALTER, M. D., F. R. S. Fellow of the Royal College of Physicians; Physician to the Charing Cross Hospital, and Lecturer on the Principles and Practice of Medicine at the Charing Cross Hospital Medical College. First American from the last English edition. New York: William Wood & Co. 1882. Pp. xii, 284. (Per Messrs. West, Johnston & Co., Richmond, Va.)

This book will not fail to be appreciated by the practitioner who has seen many cases of asthma, and some of which have obstinately resisted almost every therapeutic measure, ra-

tional or impirical, at his command. The didactic part of the book ends at p. 172. The remainder is clinical narration and tabulated cases, which greatly enhance the value of the book. The book has a good index.—W. G. E.

Diseases of the Rectum and Anus. By CHARLES B. KELSEY, M. D., etc., etc. New York: William Wood & Co. 1882. Pp. xii, 299. (From the Publishers.)

This is the August (1882) No. of "Wood's Library of Medical Authors." The book is a practical treatise on the diseases of the rectum and anus, with special attention to the pathology and treatment of these diseases. It is a *practical* volume, and of value to general as well as to "special" practitioners.—W. G. E.

Practical Laboratory Course in Medical Chemistry. By JOHN C. DRAPER, M. D., LL. D. Professor of Chemistry in the Medical Department of the University of New York, etc. New York: William Wood & Co. 1882. 12mo. Pp. 71.

We cannot commend this book. It is too short. It is scarcely more than a list of chemicals with their formulæ and reactions. It is not necessary to reduce a science to a synopsis, in order to give the appearance of conciseness.—W. G. E.

Hospital Treatment of Diseases of the Heart and Lungs, with over 300 Formulæ and Prescriptions used in the Bellevue, New York, Charity, Roosevelt, Presbyterian, St. Francis', St. Luke's, German and Mount Sinai Hospitals, in the Service of Drs. Alonzo Clark, Austin Flint, A. L. Loomis, E. G. Janeway, W. H. Draper, Francis Delafield, etc., etc., etc. By CHAS. H. GOODWIN, M. D. New York: Charles H. Goodwin. 1883. 12mo. Pp. 196.

Such a book must necessarily be useful if well compiled. Favorite hospital prescriptions must always be popular, because they are the embodiment of the experience of the most eminent men in the profession. Though we do not believe in routine practice, it is always well to have such formulæ at hand for special reference.—W. G. E.

Early Aid in Injuries and Accidents. By FRIEDRICH ES-MARCH, Professor of Surgery at the University of Kiel. Translated from the German by H. R. H. PRINCESS CHRISTIAN. Philadelphia: Henry C. Lea's Son & Co. 1883. 12mo. Pp. 117. Cloth.

We must confess to disappointment in this book. It is much too short. One thing is scarcely taken up before an-

other is introduced, giving the book the appearance of having been "flung off" at a few hours notice. The points made are good, but they are too few and too briefly stated. Another very serious defect is, that there is no index.

Experimental Pharmacology.—A Handbook of Methods for Studying the Physiological Action of Drugs. By L. HERMANN, Professor of Physiology in the University of Zürich. Translated, with the author's permission, with Notes and Additions, by ROBERT MEADE SMITH, M. D., Demonstrator of Physiology in the University of Pennsylvania. With 32 Illustrations on wood. Philadelphia: Henry C. Lea's Son & Co. 1883. Pp. 201.

This book will fill a want that has long been felt by those who wish to investigate the actions of drugs. Much more would have been done in experimental pharmacology had there been suitable works on the subject; and this little book tells us, in the shortest space, how to make the investigations so necessary toward increasing our knowledge of the actions of drugs on the system.—W. G. E.

Practical Treatise on Diseases of the Skin, for the Use of Students and Practitioners. By JAMES NEVINS HYDE, A. M., M. D., Professor of Skin and Venereal Diseases, Rush Medical College, etc., etc. Philadelphia: Henry C. Lea's Sons & Co. 1883. Pp. 572.

The appearance of so many works on diseases of the skin within a short time of each other, is a good indication. It shows that much more attention is being paid to this subject now than at any former time. The work of Dr. Hyde will add much to his already good reputation as a dermatologist. It must necessarily take a place, at once, in the front rank of standard works in medical literature.—W. G. E.

Guide to the Practical Examination of Urine, for the Use of Physicians and Students. By JAMES TYSON, M. D., Professor of General Pathology and Morbid Anatomy in the University of Pennsylvania. Fourth Edition. Revised and Corrected, with Colored Plates and Wood Engravings. Philadelphia: P. Blakiston, Son & Co. 1883. Pp. 196.

Among the many guides for the practical examination of the urine, none have stood the test of time and usage better than the above. Success is, as a rule, the test of merit, and Tyson's book has succeeded. It is just what it claims to be, and no one who wishes to perfect himself in the examination of urine should fail to get it.—W. G. E.

Manual of Histology. Edited and Prepared by THOMAS E. SATTERTHWAITE, M. D., of New York, Professor of Histological and Pathological Anatomy in the New York Post-Graduate Medical College, Pathologist to St. Luke's and Presbyterian Hospitals, etc., in Association with Pathologists of Boston, Philadelphia, Brooklyn and New York. Second Edition. Enlarged and Revised. With 202 Illustrations. With an Appendix. New York, 1882. Pp. 490. William Wood & Co. (For sale by West, Johnston & Co. Richmond.)

Within a few months the first edition of this work has been exhausted, and a new one called for. The authors embraced that opportunity to revise and enlarge it, and this has been done in a very creditable manner. The first chapter teaches us how to use the microscope; the second how to prepare microscopic objects. These are the two essentials—the ground work for histological study, and it was well to preface the remainder of the book by these chapters. The appendix contains whatever has been recently added to our knowledge of the lymphatic system and the salivary glands. Those who have toiled through the histological fogs of some other works will appreciate this book. W. G. E.

What Shall We Do for the Drunkard? By ORPHEUS EVERTS, M. D., Superintendent Cincinnati Sanitarium, etc. Cincinnati: Clarke & Co. 1883. 8vo. Pp. 51. Paper. 50 cents. (From Publishers).

This unpretentious volume contains so much of fact, and the author argues so forcibly from his premises, that we are sorry some of the "benevolent associations" have not undertaken its *free* distribution among the people—just as colporteurs and missionary agents spread their religious tracts broad-cast over the country. It, in reality, represents "a rational view of the use of brain stimulants," and we might add a rational view "of the treatment of the inebriate. Let States establish something like inebriate prisons or retreats—just as they have their jails and penitentiaries for the punishment of offences. Let the *State* have power to commit proper subjects to such State institutions, under proper commitment process at law—just as at present is the custom in regard to lunatics. There are *drunkards* who might themselves seek to be saved from further degradation by voluntarily asking to be committed; there are others that friends would have committed in the hope of restoration to the proper walks of life; there are others that the State authorities might have to commit in order to restrain vicious habits and fatal consequences. As there are many who, having

been guilty of crime so offensive that have to be committed to prisons, on being released, become purer in their habits, and never again offer cause for arrest, so there are *many* drunkards who, if once committed, as above indicated, would, upon their release, ever afterwards lead lives of sobriety, and become useful to society, as well as a support and pleasure to their families. We venture further the remark that many a suicide would be averted. A large number of men who are generally valuable citizens, having family responsibilities and who are unfortunate in their business results "take to drink," and become inebriates. The law, in pursuing some such course as is suggested by Dr. Everts in this carefully prepared and thoughtfully arranged work, would accomplish far more good for the public weal than it does now by simply waiting until the "drunkard" commits a crime requiring his imprisonment or his execution.

Guide to Therapeutics and Materia Medica. By ROBERT FARQUHARSON, M. D., Edinb., F. R. C. P., London, etc. Third American Edition, Revised by the Author. Enlarged and Adapted to the U. S. Pharmacopœia. By FRANK WOODBURY, M. D., Physician to the German Hospital. Philadelphia. Philadelphia. 1882. Henry C. Lea's Son & Co. Pp. 526, (For sale by West, Johnston & Co., Richmond.)

This is the best *students* Materia Medica that we have ever seen. The pages are double columned—one column being for the physiological action—the other for therapeutic use. In this way the student can study the two together. The book contains an introduction treating generally of tonics, acids, alkalies, etc. It also contains a list of poisons and their chemical and physiological antidotes, and a very complete table of the metric weights and their equivalents. Though we can recommend it so highly to *students*, it would be a very useful addition to the practitioner's library. There are two indices—one of therapeutic agents; the other of diseases.

W. G. E.

System of Human Anatomy, Including its Medical and Surgical Relations. By HARRISON ALLEN, M. D., Professor of Physiology, University of Pennsylvania, etc. Section III.—*Muscles and Fasciæ*. Philadelphia: Henry C. Lea's Son & Co. 1883. Royal 4to. Pp. 112. (From Publishers.)

All that we said in praise of Sections I and II of this most excellent work, we wish to repeat. Some of our correspondents have called our attention to some typographical errors

Treatise on the Practice of Medicine, for the use of Students and Practitioners. By ROBERTS BARTHOLOW, M. A., M. D., LL. D., etc., etc., etc. Third Edition, Revised and Enlarged. Pp. xviii—918 New York. D. Appleton & Co. Cloth \$5. Sheep \$6. (For sale by West, Johnston & Co., Richmond.)

Any attempt to add further praise to this work from Dr. Bartholow's pen would be useless. The appearance of a third edition in three years is sufficient to show that the book is one of rare value. Indeed as a concise, compact and thoroughly reliable work for the practitioner it stands without a rival.

W. G. E.

PAMPHLETS, REPRINTS, ETC., RECEIVED for which we have no room for fuller notice, etc.; but most of which can be obtained by enclosing a letter stamp for pamphlet to the respective authors named.

Percentage of College-Bred Men in the Medical Profession. By CHARLES MCINTIRE, JR., M. D., Easton, Pa.—Read before American Academy of Medicine, Oct., 27, 1882. 8vo. Pp. 13. [An interesting and instructive paper, showing how few doctors have proper preliminary training to justify their entering upon the discharge of professional duties. Not until Boards of Examiners are established to examine candidates before offering for practice, we see but little, if any hope, for a relief from the large number of unqualified doctors who now have medical diplomas.]

Importance and Means of Ventilation. By G. P. CONN, M. D., Concord, N. H. 1882. 8vo. Pp. 28. [Reprint from Report of State Board of Health. This pamphlet contains something of a *summary* of established facts on the subject of which it treats. It is well written and illustrated; and health officers, architects, and those proposing to build—either public or private homes—should examine it.]

Use of the Curette in Gynecological Practice. By B. BERNARD BROWNE, Professor of Diseases of Women in the Woman's Medical College of Baltimore, Md., etc. 1882. 8vo. September, 1882. [The printer ought to have known or done better than to have commenced the "unleading" of this pamphlet on the third page. The "imprint" is on the cover. Why add it again on the last page, at the expense of a few "leads" which much interfere with the pleasure of reading even the best of articles? The author is an *authority* and his *exposé* of the uses of his specially devised and illustrated curette are valuable to every doctor who has to perform operations on parties—females or males—requiring its use.]

Editorial.

The Index to Annual Volume IX of the *Medical Monthly* (which is completed with this March number) will appear with the April number.

In this connection, we wish to remind many of our subscribers that their subscriptions expire with this number. It will be a matter of great accommodation if each one who intends to continue his subscription will at once remit \$3 for the tenth annual volume, to begin with April issue; and we trust that our friends will also induce their friends who are not subscribers to begin at once to take this journal. It would also be an accommodation if parties who do *not* propose to continue with us would drop us a postal to this effect.

The Index to the Third Volume of the Transactions of the Medical Society of Virginia is issued with this number for the convenience of those who may wish to bind the *Transactions* separately from the journal. As stated on each of the title pages of the *Transactions*, the *third volume* begins with the session of 1879, and the paging is continuous through Parts II, III and IV—1880, 1881 and 1882 respectively.

The Association of American Medical Editors.—The next annual meeting will be held in Cleveland, Ohio, simultaneously with that of the American Medical Association, on June 5th and 6th, 1883.

Order of Exercises.—Tuesday, June 5th, 7.15 P. M. Roll called; reading minutes of previous meeting; President's address and discussion thereon; reports of committees; deferred business; new business; election of members; adjournment. Wednesday, June 6th, 7.15 P. M. Roll called; reading minutes of previous meeting; address by Dr. Henry O. Marcy, of Boston; reading of special papers by Dr. John A. Oosterlony, of Louisville, Ky., and Dr. Alexander J. Stone, of St. Paul, Minn.; discussion of addresses and papers; reports of committees; deferred business; new business; election of officers and members; adjournment.

The subject of the address to be delivered by the President, Dr. N. S. Davis, of Chicago, is "*The Present Status and Tendencies of the Medical Profession and Medical Journalism.*" A free discussion upon this important subject is invited, which will be open, not only to members, but to all physicians present. Dr. Marcy's address will be upon the subject of "*Journalism devoted to the Protection and Concentration of Medical and Surgical Science in Special Departments.*"

The Secretary (Dr. J. V. Shoemaker, of Philadelphia, 1031 Walnut street) was authorized at the last meeting of the Association, held at St. Paul, Minn., to make the above arrangements for the coming meeting, and also to specially invite all the members of the profession, and friends attending the meeting of the American Medical Association, to be present. The meetings will be held in the interval between the meetings of the Sections of the American Medical Association, and the social entertainments of the evening. The sessions will be short, and undoubtedly interesting.

Personals, Items, etc.—*Dr. Wm. G. Eggleston*, late of Hampden Sidney College, Va., has moved to Philadelphia, to become the Assistant Editor of the *Medical News*, and the *American Journal of Medical Sciences*, edited by Dr. J. Minis Hays. Dr. Eggleston has made himself popular with our subscribers, because of his well-selected and well-rendered translations from Spanish, Italian and other foreign exchanges, as well as because of his original contributions of value to this journal. We regret to give him up; but we are glad to believe that our loss will prove promotive of his own interests. It is unfortunate for the South that, at present, it has not the satisfactory means of retaining its ingenuous and learned sons.—*The Northwestern Medical College* held its annual commencement in Toatle's Opera-house, St. Joseph, Mo., February. 20th, 1883. Eighteen graduates in medicine were awarded diplomas.—*Dr. Walter A. Newman*, of Norfolk, Va.—married scarcely six months ago—has to endure the grief of the recent death of his wife. He has our heartfelt sympathy, as he has the regrets of a host of his and her friends.—*Medical College of Virginia*.—The announcement of the approaching commencement of this college is published. We have seen no announcement of the fact, but we understand that a class of very worthy gentlemen is about to be graduated. It is somewhat unusual for medical journals of the city in which the college is situated not to receive some official notification of so important an event. We think we have the right to state this much in regard to a matter which has recently been thrust upon the Editor. We still assert, as an answer to all the questions that have been asked of us, relating to this almost local issue, "Let the courts decide whether the new or the old Board is authoritative." Whoever *insinuates* that the Editor of this journal has changed his well-known political opinions to secure favor, either does not know him and his sentiments, or else is guilty of a *deliberate misrepresentation*. We are sorry

to use such language in a medical journal. This notice is not intended for readers in other States, but for those who have misrepresented the *personal political* standpoint of the Editor of the *Virginia Medical Monthly*. *Politics ought not to be involved in medicine*, and he is foolish who attempts to bring the one into the other. We have only asserted that the present *Board of Visitors or Directors* needs reorganization.—*Poisoning Cases at the Western Lunatic Asylum* (Va.) Dr. J. W. Mallet, the distinguished Professor of Chemistry at the University of Virginia, has lately examined the contents of three of the stomachs of the unfortunate victims of fatal poisoning at the Western Lunatic Asylum (Va.), and has found that aconitine was the poison used. But the detectives have not been able to “work up the case,” as to the guilty party or parties who put the aconitine in the medicines of those who died. It is generally supposed that some one of the insane inmates of the Asylum is the murderer. We are glad to learn that no one of the heads of the several departments of the Asylum is adjudged culpable even of carelessness. We trust the Physicians of the institution will publish full reports of the cases of fatal poisoning in some journal—both for professional good and jurisprudal value.—*New York Code of Ethics*.—One of the first subjects of general interest considered by the Medical Society of the State of New York, on assembling in Albany, February 6th, 1883, was that of their revised Code. Our readers will recall its import. It allows consultation, on the part of “regular practitioners,” with eclectics, homœopathies, etc. It was on account of this measure, adopted last year, that the American Medical Association refused recognition of the delegates of the New York Society last June while in session in St. Paul, Minn. During the recent session of the New York Society, the decision of last year was re-affirmed by a vote of 105 against 95 — *What is the Relation of the Regular Profession of New York State to that of Other Parts of the United States?*—It is an avowed principle of the Code of Ethics of the American Medical Association, that all practitioners who do not recognize its authority are to be classed as “irregulars.” Hence, they are not open to professional recognition, and therefore it would be “derogatory” to the dignity of members of the “regular profession” to hold consultations with them. But, in the list of the 105 who voted their sentiments as being opposed to the restrictions of the Code of the American Medical Association, there are some men of national professional eminence who are being sought in consultations by “regular doctors” from all parts of the country.

Are all the "regular doctors" of other States who may wish to consult with New York surgeons or physicians of wide reputation and established ability required, first of all, to write, asking whether or not *he* is a member of the New York Society? We will not go further just now; but we venture the assertion, that if a judicious conservatism is not exercised in the management of this vexed question, the result will be that in less than ten or fifteen years, there will be a marked degeneration of the material of the American Medical Association. *Principles* live forever, and it is upon them we build character; but customs die out, as generation succeeds generation. Customs are like fashions. Whatever may be the value of the cloth, or the style of the suit of clothes this season, it will appear antiquated and worn-out a few years hence. There may be no objection to a fashion when established; but a persistence in its use for years, when everybody else has adopted a different color and another "cut," makes the wearer of the old suit the jest of the city. Ought not we, as *doctors*, attempt to advance with this age of liberal thought, and greater privileges of independent personal opinion?—*Fees of President Garfield's Medical Attendants.*—The Congressional Board of Audit, allowed Dr. D. W. Bliss, of Washington, D. C., \$6,500; Drs. D. Hayes Agnew and Frank H. Hamilton, each \$5,000; Dr. Boynton, \$4,000, and Mrs. Dr. Edson, \$3,000. We regard these amounts as *very* small, *under the peculiar circumstances*. Had so many lawyers been granted so little, the Nation would have been ashamed of the small aggregate of \$18,500 for the special professional services rendered. The medical profession is ranked next to that of the "calling to the ministry"; and the pecuniary value for the services of the doctor would be gladly paid, if the professional fee was called for at the moment he enters the sick-room.

Obituary Record.

Dr. Geo. L. Nicolson, the last member of the original appointees for the organization of the Board of Directors of the Medical College of Virginia, has just died, at his home in Middlesex county, Va. He was, in former years, a practitioner of extended fame in this section. His son, Dr. Wm. P. Nicolson, Dean of the Southern Medical College of Atlanta, Ga., has made for himself an enviable reputation.

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(APRIL, 1882—MARCH, 1883, inclusive.)

EXPLANATIONS.—This Index is divided into two parts: first, **Index of Contributors**, which also gives the titles of articles, etc.; and, secondly, the **Index of Subjects**.

The letter T preceding some of the figures refers to the paging of the **Transactions of the Medical Society of Virginia** (Part IV, of Volume III.) This fourth Part of Volume III of the **Transactions** was issued with the January number, 1883. But in binding this Volume IX of the **Medical Monthly**, the **Transactions** should be separated from the January number, 1883, of the journal, and be bound after the March number, 1883.

Notices of books, colleges, journals, deaths, personals, and proceedings of societies, etc., are indexed in the **Index of Subjects** under the respective words **Book Notices**, **Colleges**, **Journalistic**, **Obituary Record**, **Personals**, and **Society and Health Board Proceedings**.

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The Index to Volume III of Transactions

Is in preparation, and will be sent to every Fellow of the Society in a few days in circular. This is stated for the benefit of those who may wish to bind the several annual *Parts* of the present volume in one book.



TRANSACTIONS
OF THE
THIRTEENTH ANNUAL SESSION
OF THE
Medical Society of Virginia,
HELD AT
FAUQUIER WHITE SULPHUR SPRINGS,
SEPTEMBER 13th, 14th and 15th, 1882.
PART IV—CONCLUDING VOLUME III.
WITH AN
ALPHABETICAL REGISTER OF FELLOWS,
AND AN
INDEX FOR VOLUME III.

Resolved, That there shall be affixed to the title page of each edition of the Transactions a declaration that the Medical Society, in publishing papers, does not thereby endorse the views of authors; such endorsement shall only be by vote, to be found in the minutes of the session.—Page 15, Transactions Fourth Session.

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NOTE BY THE RECORDING SECRETARY.

The present thirteenth annual publication of Transactions constitutes Part IV and conclusion of Volume III. The paging is therefore continued from the last page of Part III, which contained the Transactions of 1881.

ADDRESS OF THE FIRST VICE-PRESIDENT.

DR. WM. L. ROBINSON, Danville, Va.

Fellows of the Medical Society of Virginia :

I greet you to-night with a joy born of twelve months' pleasurable anticipation. To those who have sacrificed personal interest to attend this meeting, I extend a warm, heartfelt greeting. To those whose duties to suffering humanity positively prohibit attendance, I tender purest sympathy ; but to those either too careless to investigate or too ignorant to appreciate the advantages of sustaining a State Medical Society, I proffer my profound pity. I beg of you, gentlemen, not to adjudge my language harsh, for the life of this Society means sustenance of medical ethics, brotherly love, advancement by study and principle to that standard to which each one is eligible. The suspension of this Society suggests a picture too dark to contemplate. In its wake would follow ignorance, quackery, jealousies enacted too numerous to recount.

I would suggest, first, that proper consideration of place of meeting be exercised. Richmond presents many advantages, especially at the time of her agricultural fairs. I will venture the assertion that more doctors will attend the fair than the meeting of the Society. Forbid banquets by local Societies, but if desired let it be arranged as a State Society affair.

Secondly, Let the presiding officer be elected in the beginning of the session, so that he can appoint his committees and especially select the different members to write on different subjects, so that those selected may refuse unless they intend to write and report at next meeting. It is absurd and ruinous to appoint half a dozen gentlemen on the various medical subjects, and at the next meeting one or possibly two report and the rest of the Reporters even absent themselves.

I would further suggest that all papers read before the Society should be discussed before the Committee on Publications is instructed to publish, or

else the Committee should have discretionary power to comment. Full and respectful discussions must be beneficial.

The Ex-Presidents' prize is undoubtedly a step in the right direction, and most commendable.

Now, with a popular place of meeting, and an auspicious time, with pledged papers on all the subjects and full discussions, I think the Society would be better attended. If every one will lend his aid, the medical men of Virginia must grow in knowledge and usefulness. Let every member feel that if this Society retrogrades, he is personally responsible.

I would that the noble example of our worthy President, whose punctuality in answering roll call was only exceeded by his zealous work in behalf of this Society, could be infused in each member. In behalf of this Society I extend to him our warmest sympathy in his ill health, deep regret at the loss of his valuable services, and earnest wishes for speedy restoration. In his behalf I greet you again most cordially. But, gentlemen, I can always work with a cheerful heart and firm faith when my hands are upheld by the smiles of fair women.

I congratulate the Medical Society on the large number of admissions to membership from this section. I hope they will attend when we meet in other sections.

REPORT ON ADVANCES IN SURGERY.

DRAINAGE IN GUNSHOT WOUNDS.

By HUGH M. TAYLOR, M. D., Richmond, Va.

At no time in the history of surgery has greater interest been felt in any subject than has been evinced during the past year in the treatment of gunshot wounds. The value of drainage in surgery is also one of the subjects which is now claiming the attention of the leading surgeons throughout the world. In view of the interest and importance of these subjects, I have concluded to limit my report to a consideration of *The Value of Drainage in Gunshot Wounds*.

Gunshot wounds are defined as *contused* and *lacerated*—the contusion and laceration extending along the whole track made by the missile. At one point the tissues are pulpified; at another lacerated, and at another split or pushed aside; but at no point does such a wound present the characteristics of an incised wound.* It follows that it is by sloughing, granulation and cicatrization that repair takes place in gunshot wounds. The amount of sloughing depends upon the amount of injury done, which, in its turn, depends upon the shape, size and velocity of the missile, and the tissues through which it passes. Gunshot wounds are invariably attended with the formation of inflammatory products, and also by many conditions which tend to prevent the escape of the effused blood, serum or pus. A muscle or tendon may be torn, split, or cut in two. At any part of the track of a bullet, a displaced muscle, tendon, or flap of torn tissue may

*This is the general belief; but Michel, of S. C., and others, state that gunshot wounds are sometimes like incised wounds, and heal by first intention. We think that this must happen only in those wounds made by bullets which have been flattened by striking some hard body.

block up the outlet. The bullet may be deflected, and its path present various angles and curves. As the injury done in all parts of a bullet's course is not the same, so the repair along the whole route is not accomplished at the same time. One part may still be suppurating while another is granulating; while in another the process of repair may have been completed. The long, narrow, tortuous or angular track, obliteration by swelling, by flaps of torn tissue, by displaced tendons and muscles, obliteration by repair in one part while suppuration or granulation is still progressing in another—all contribute to prevent the free escape of inflammatory products, and by doing so encourage further inflammatory action.

No principle in surgery is better established than that which calls for the frequent and early removal of all inflammatory products in anticipation of their decomposition and destructive influence. I think by position, dilatation, incision, by the use of such dressings as sponge, absorbent cotton and other agents which promote drainage by capillary attraction, and by the use, if necessary, of drainage tubes, we can secure this important end in gunshot wounds better than by any known means at our command, and without adding additional danger to the case.

In order to estimate the value of drainage in general surgery, it is necessary to recall the principal methods now in vogue of treating wounds. It will be seen that drainage is a most important, if not *the* most important adjuvant in all of them.

The cardinal principle in the *open method* is to secure complete drainage. This is accomplished by leaving all wounds open. *Callender's method* of treating wounds consists in introducing drainage tubes, flushing out the wounds with antiseptic washes, and in covering them with some material saturated with the antiseptic solution. In conjunction with the drainage tube so constantly used with Lister's dressing, this method has much to commend it. We are forced, however, to attribute much of the good resulting from it to the use of an absorbent dressing which, by capillary attraction, removes the serum, blood and pus from the surface of the wound, prevents atmospheric contact, or at least acts as an atmospheric filter; also to the use of drainage tubes, which prevent purulent accumulations and their consequences in the deeper wounds.

Among others may be mentioned the *dry dressing* of Mr. Gamgee, the *cotton-wood dressing* of M. Guerin, and the *sponge dressing* of McClellan—all of which (the latter especially) favor drainage by capillary attraction, absorbent cotton, oakum, charcoal poultices, horse hair, strands of silk, glass tubes, rubber tubes, and decalcified bone have all been advised and used to secure perfect drainage.

It has been objected that drainage tubes may act as foreign bodies, keep up irritation and prevent repair. I claim that if they keep open a wound

leading to a foreign body or to an accumulation of pus, they fulfil the very indication for which I would urge their use; or that if acting as a foreign body, the evil they produce is slight in comparison with the good they effect. The smallest quantity of septic fluid retained is of more consequence than the largest speedily drained. The danger of septic poison far outweighs that of local inflammation. Without free drainage septic poisoning of the wound and the whole system occurs. Poisoned blood cannot furnish material for the cure of wounds. Our chief aim in such wounds should be to keep them open until nature has surrounded the foreign body with lymph, and brought about repair along its track, or in an abscess, if there be one.

It has been claimed that so long as active symptoms are absent, the less that is done in the treatment of gunshot wounds the better. We cannot prevent inflammatory action in such wounds, but we can lessen its dangers by removing the inflammatory products. Soft parts dying along the track of bullets are dealt with so well by nature that the surgeon has only to take precautions against putrid infection by seeing that sloughs are not retained and made obnoxious. It is not the missile so much as the injury done by it in its passage that we are called upon to fear and actively to treat. Under circumstances favorable to repair the bullet becomes encysted. Under no circumstances can a surgeon feel satisfied when he has to deal with a deep-seated suppuration not thoroughly drained. So long as purulent accumulations remain, complete repair is out of the question. The cause being present, the consequent blood-poisoning will not be wanting. It matters not whether the retained products be blood, serum, or pus, they are capable of producing septic poison. The bloody serum in traumatic peritonitis and the sero fibrinous exudation in traumatic pleurisy are common illustrations. The smallest pus cavity not thoroughly drained is of more consequence than any ordinary incision. To secure free drainage, we are fully justified in resorting to the use of the knife. "Debridement" of the French has, in my opinion, more common sense to commend it than the plan of hermetically sealing gunshot wounds, and far more than the idea of securing union by primary adhesion. An incision eight or ten inches long is fully justifiable, and is frequently practised to evacuate and drain abscesses in the peritoneal cavity or in any of its contained viscera. At any sacrifice the cause of purulent infection should be removed. These principles of general surgery are applicable to the treatment of suppurations from gunshot wounds, and their more frequent observance must, I think, lead to better results in treating such injuries.

Stress has been laid upon the difficulty which attends the introduction of drainage tubes along the uncertain track of a bullet. Patience and skill are often necessary; but with patience, skill and judgment in adapting the

instruments to the end to be accomplished, I think the chances of failure should be very small. I cannot conceive of a continuous bullet-track so tortuous that it could not be followed by a flexible probe properly handled; and if necessary the wound should be enlarged and drainage secured. As granulation progresses, it encroaches more and more upon the drainage tube, until finally it is pushed out to make way for the advance of repair. At the last meeting of the International Medical Congress, held in London, 1881, Prof. Volkman referred to the fact that drainage tubes had been permitted to remain in various parts of the body for a long time without doing harm, and had finally to be cut out.

In *penetrating gunshot wounds of the joints*, the indications in favor of free drainage are especially well marked. Upon no point in surgery has there been greater diversity of opinion than in that which relates to the treatment of penetrating wounds of the joints. The well-known fatality of such injuries endows the subject of their treatment with special interest. The recent and unmistakable advance which has been made in treating suppuration in joints from other causes than gunshot wounds should, we think, be of great profit to surgeons in treating like conditions from gunshot wounds. Suppuration after penetrating wounds of joints is an invariable rule. Few, if any, surgeons now question the advantage of treating suppurating joints by free incision, drainage, and antiseptic washes.

In treating *compound fractures of the extremities* from gunshot wounds, we will also find a field of great usefulness for the drainage tube. It has been advised and practised with encouraging success to pass the tube entirely through the fractured extremity by making a counter opening.

With the light now before us, we are not, I think, called upon to regard *gunshot wounds of the kidney* as necessarily fatal. In pyonephrosis we do not hesitate to make a free incision into the kidney structure, and provide for drainage. The mortality following the cases treated in this way presents a strikingly favorable contrast with that following gunshot wounds of the kidney treated upon the expectant or "do-nothing" plan. Suppuration in or about the kidney from an idiopathic or traumatic cause will bring about, in many respects, the same conditions; and these conditions will be benefited by the same kind of treatment. The frequent and early removal of the blood, serum, pus, and urine, in anticipation of their decomposition and destructive influence, is imperatively called for in gunshot wounds of the kidney. It is the key note to the successful treatment of all such cases. Whenever we have good reason to think that there is pus collected or urine extravasated from a gunshot wound in or about the kidney, I would urge the immediate introduction of a drainage tube; and if that does not afford free drainage, then by all means dilate or incise the wound, or make a free counter opening. I am fully persuaded that this plan of

treatment has common sense to commend it; and am as fully persuaded that it is the one course of treatment to be pursued in suppurative action in or about the kidney from gunshot wounds.

The same principles of treatment which have been suggested in gunshot wounds of the kidney apply with equal force and prospect of success to *gunshot wounds of the liver*. In abscesses and cystic disease of the liver, more reliance is placed on aspiration, free incision and drainage than on any other expedients; and the good which often results from such treatment points clearly to the course which should be adopted in treating like conditions from gunshot wounds of the liver. Gunshot wounds of the liver are not always attended with injury to the peritoneum, nor the escape of blood and other inflammatory products into that cavity. If, however, we have good reason to suppose that such a condition of affairs does exist, and perfect drainage is not secured by drainage tubes through the wound of entrance or exit, then the plan of drainage mentioned in connection with gunshot wounds of the belly must be adopted. Gunshot wounds of the liver are fatal, either from primary or secondary hæmorrhage, or from the formation and retention of secondary products within or without the peritoneal cavity. If blood, pus or bile escape into the peritoneal cavity, of course, the danger from septic infection is very much increased; and a recognition of this fact forewarns the surgeon of the danger to be combatted.

In *gunshot wounds of the bladder*, with or without peritoneal penetration, the value of drainage is indisputable. Apart from the necessity of providing for the escape of inflammatory products, drainage to prevent urinary infiltration is of the utmost importance. Its consequences—pelvic cellulitis and peritonitis—are conditions which seriously complicate the case. As early as 1851, Prof. S. D. Gross advocated opening the abdomen in the middle line and sponging out the peritoneal cavity when rupture of the bladder had occurred. Many cases of wounds of the bladder have been successfully treated by draining that organ by means of drainage tubes or retained catheters. The indications in favor of drainage tubes in gunshot wounds of the bladder are so apparent that little need be said in its favor. Just before his death, Prof. James R. Wood, of New York, mentioned three cases of wounds of the bladder which he successfully treated by drainage tubes. (*Gaillard's Med. Jour.*, Oct., 1881.)

Thomas Longmore, in his famous *Treatise on Gunshot Wounds*, calls attention to the fact that in *gunshot wounds of the head* the injury to the scalp is often slight, while that to the encephalon is extensive. In a class of injuries characterized by a small wound leading to a serious contusion, the importance of thorough drainage is not easily over-estimated. Free vent to inflammatory and other products, after trephining, and after gunshot fractures of the skull, is of the last importance. To prevent compression

of the brain by the retention of inflammatory products, to avoid blood-poisoning, and to encourage repair in the local injury, drainage is absolutely needed. In no class of gunshot wounds is the advantage of thorough drainage more clearly shown. In revising Longmore's classical article for the new edition of Holmes' *System of Surgery*, Dr. Hunter McGuire, in the following words, enforces the importance of drainage in this class of gunshot injuries: "All loose pieces of bone should be entirely taken away and the wound should be left open—no sutures or adhesive plaster being used, that free discharge of all fluids may take place as soon as formed. In no operation in surgery is perfect drainage more important."

At the last meeting of the American Surgical Society, Dr. W. T. Briggs, of Nashville, said he thought trephining was called for in bruises of the skull to allow the escape of inflammatory products.

We find that the cases of penetrating *gunshot wounds of the chest* which recover are the cases in which there is thorough drainage. This fact is well-recognized and applied in treating all penetrating wounds of the chest. No surgeon would now think of hermetically sealing a penetrating wound of the chest. On the contrary, we are instructed by the very best authorities to keep the wound open—the most dependent if there are two—in order to favor the escape of blood and other inflammatory products. We are instructed to place the wounded side down. This promotes drainage, limits the action of the injured side of the chest, and does not impede the action of the uninjured side. From the treatment advised, we must conclude that drainage is an important indication in treating the consequences of penetrating gunshot wounds of the chest. The process of cure after such wounds of the chest does not differ from that in other parts of the body. In a few days suppuration becomes established along the whole track of the bullet. The matter may be discharged, through the wound of entrance or exit, through a communication with the bronchial tubes, or through an opening established by nature. In cases in which some such outlet is not secured, the pleural cavity is generally found to be the seat of extensive inflammatory action, with accumulations of sero-purulent fluid, floating lymph, and broken-up clots. It is in this class of cases that the drainage tube seems especially indicated; and, again, we are able to cite the analogy between the treatment of such cases and those of empyema from other causes than penetrating gunshot wounds. In empyema we are often able to accomplish great good by aspiration, paracentesis, incisions, drainage tubes, and flushing out the cavity of the chest. In empyema, the drainage tube is usually introduced in this way: After paracentesis, a long, bent metallic probe, threaded with a piece of silk, is introduced into the opening. The end of the probe is made to press against an intercostal space at the back and lower part of the pleural cavity. When felt in this

position, an incision is made upon the end of it, and the thread drawn through. To this thread the drainage tube is secured and drawn into the cavity of the chest. This method of treating empyema has been extensively practised, and throws an important light upon the course to be pursued in suppuration within the pleura from gunshot wounds.

In order to secure perfect drainage, it is necessary only to make the drainage tube act as a syphon by having the end which is outside on a level below that which reaches the serous or purulent accumulation within the cavity of the chest. It is necessary only to pass a tube of sufficient length through the wound of entrance or exit, or through the opening made by paracentesis. The expansion and contraction of the chest act as a pump, and helps to drive fluids through the tube. If the end of the tube is put into a dish or bottle containing an antiseptic solution, no air can pass through it into the chest; and, as drainage is thus perfectly secured, any other wounds communicating with the cavity may be closed, and thus further prevent the entrance of air into the suppurating cavity.

Aspiration or paracentesis alone is of only temporary benefit, as the purulent or sero-fibrinous accumulations nearly always re-form, and repeated operative interference is necessary; while, with the drainage tube, drainage is continuous, quick and perfect; and through it, stimulating or antiseptic washes may be easily introduced into the cavity and as easily withdrawn by its action as a syphon. The escape of a small quantity of blood into the cavity of the chest is not necessarily attended with serious consequences; but as any great amount of hæmorrhage would, as a rule, ultimately result in empyema, it would be better surgery to get rid of this effusion previous to its degeneration into pus. The importance of drainage in such cases has been brought forward from time to time by various writers.

In a revised edition of John Bell's *Principles of Surgery*, by Chas. Bell, published in 1826, we find the following comments: "Whatever be the cause of bleeding in the pleural cavity, these are your rules: First, put in your finger. Perhaps it may discover or may evacuate the blood. If the blood does not follow the finger, then some tube must be introduced, and the tube for so simple a business need not be a nice one. If you cannot get your tube into the thorax, you must enlarge the wound, and enlarge it freely. To be afraid of exposing the lungs to air when they are already torn with a bullet and loaded with blood, is mere childishness. If you find the wound in the chest too high to empty its cavity, or too contused and oblique for you to dilate, you must do an operation which, as it is commonly practised for pus in the breast, is called the operation for empyema. In plain words, whenever necessary make a new wound low down, and introduce your tube there, that there may be a free drain."

In Druitt's *Modern Surgery*, of 1856, we find tents and canulæ advised in this condition. Hippocrates appreciated the importance of drainage, and treated such cases by boring a hole through a rib, and introducing a short, smooth, metal tube into the opening. By many, it has been advised to exsect a portion of rib, and then introduce a drainage tube. There must always be room for the drainage tube in an intercostal space without this resection. The number of cases which have been successfully treated by means of thorough drainage is very large; and a glance at the journalistic literature of the day will show that it is becoming more and more popular.

The same plan may, we think, be applied with benefit to the treatment of *gunshot wounds of the mediastinum*, which are not immediately fatal. In the loose, cellular tissue of the mediastinum suppuration is active and profuse; and large collections of matter, resulting in pyæmia and death, is a frequent sequence of gunshot wounds of this region. Nature sometimes effects an opening through some part of the thoracic walls, and recovery sometimes results. If nature's efforts are found to be inadequate to this task, we are fully justified in aiding her by an incision and drainage, if necessary, by means of a drainage tube. It has been advised to trephine the sternum in order to evacuate deep-seated collections of matter in the anterior mediastinum. When blood has been effused into the cavity of the pericardium and seriously incommodes the action of the heart, it has been advised to open the cavity of the pericardium, evacuate the blood or matter, and thus relieve the oppressed organ. If such expedients are to be thought of, the simpler expedient of introducing a drainage tube through a gunshot wound or an incision into the mediastinum must be entitled to consideration. Rosenstein, of Leyden, has recently successfully drained a suppurating pericardium by means of a drainage tube. His case is unique, in that it is the first in which the pericardium has been opened and a drainage tube introduced with the specific object of removing purulent fluids. The success of this case is indicative of the course to be pursued in suppurative action of the pericardium from gunshot wounds. The researches and paper of Dr. J. B. Roberts, of Philadelphia, have also, with Rosenstein's, greatly enriched the literature of this subject.

The value of drainage in penetrating *gunshot wounds of the belly* is at this time attracting more attention, perhaps, than any subject connected with the treatment of gunshot wounds. The comparative success of ovariectomy of to-day with that of ten years ago, is due in a great measure, to a recognition of the value of drainage in peritoneal wounds. Spencer Wells first attributed the mortality following ovariectomy to septic poison. Marion Sims profited by this conclusion, and advised the use of drainage after ova-

riotomy. In a paper entitled "Gunshot and other Wounds of the Peritoneum," read before this Society in 1873, Dr. Hunter McGuire showed the importance of drainage in gunshot wounds of the peritoneal cavity. After speaking in favor of operative interference, he remarks: "And when the abdominal wall is opened, the track of the bullet explored, internal hæmorrhage arrested, or fæcal extravasation prevented, the chances of recovery will be still further increased by making a free outlet for the red serum which traumatic peritonitis produces, and which kills by septicæmia. The bottom of the peritoneal cavity in woman is the recto-vaginal pouch. In man the bottom of the cavity is the fold between the bladder and rectum. An outlet here into the rectum would drain the whole cavity, and could be made without difficulty before the abdominal incision was closed." In a more recent paper read before the American Medical Association, in May, 1881, and entitled "Operative Interference in Gunshot Wounds of the Peritoneum," Dr. McGuire further enforces the value of drainage in penetrating wounds of the abdomen, and remarks: "If the original wound of entrance is dependent, drainage may be secured by keeping this open. If the wound is a perforating one and the aperture of exit dependent, the patency of this should be maintained, and, if necessary, a drainage tube of glass or other material introduced. When there is no wound of exit and the wound of entrance is not dependent, then a dependent counter opening should be made and kept open with a drainage tube." In October, 1881, Dr. Marion Sims read a paper before the New York Academy of Medicine, entitled "The Recent Progress of Peritoneal Surgery." This paper is a valuable addition to the literature of this subject. Upon no point is more stress laid than upon the value of drainage in gunshot wounds of the belly. In the discussion which followed, Dr. Lewis A. Sayre said that if he was ever shot in the belly he would pray God that there might be powder enough to send the ball clear through him, as the most important item in the treatment of such wounds is drainage. Gunshot wounds of the pelvis drain the whole peritoneal cavity, and hence are not nearly so fatal as gunshot wounds of the belly.

In concluding this subject, I would reiterate—

1st. That union by primary adhesion is exceedingly exceptional in gunshot wounds.

2d. That suppuration, granulation and cicatrization are invariably combined in the process of repair.

3d. That extensive accumulation and burrowing of pus in a deep, narrow bullet track is to be expected and feared.

4th. That the deep, narrow, angular and frequently obliterated track does not afford perfect drainage.

5th. That in such cases the principles of surgery applicable to other deep-seated suppurations must be applied.

6th. That position, incision, drainage tubes and the other means mentioned are of great importance in the treatment of gunshot wounds.

7th. That by nature's efforts, analogy and reason, we are taught to think that their more frequent use will lead to better results in this class of injuries.

8th. That the danger incident to their use is far outweighed by the benefit which accrues.

DISCUSSION.

Dr. R. I. Hicks, of Casanova, remarked, in regard to gunshot wounds of the chest, that if Dr. Taylor meant that drainage tubes should be introduced to anticipate any collection of noxious matters, he could not endorse the suggestion, because he had seen too many cases of gunshot wounds of the chest recover without any bad symptoms, upon the expectant plan. But he supposed that all surgeons of the present day agree that collections of pus or other offending matters should be evacuated, if practicable, wherever found. The principle is as old as the fathers of medicine.

He had also seen several wounds of the abdomen recover in like manner; and, even in these cases, interference should be withheld until it was ascertained that offending matters were either retained or were in the act of formation. If formed, he entirely agreed as to the importance of early removal or evacuation; because under the non-interference plan in such cases death almost inevitably results.

Dr. J. E. Chancellor, of Charlottesville, spoke of two cases met with in his practice bearing upon the point at issue. The first case he alluded to was that of a Confederate soldier, of high position, who, during one of the battles of the Confederate war, was wounded between the sixth and seventh ribs of the right side. The Minnie ball came out under the lower angle of the scapula of the same side of the body. There were expectoration of blood and the usual signs of complete perforation of the lungs, the pleura and the chest walls. In a few days pus formed; some was expectorated, and some passed out through the wounds of entrance and exit; there was also some pleuritic effusion. This condition, of course, was attended by cough and dyspnoea. The soldier was brought to the hospital at the University of Virginia, of which Dr. James L. Cabell, Professor of Surgery in that institution, had charge. An opening was made with the knife along the lower border of the sixth rib, and eight or ten fluid ounces of pus were drawn out. After this operation, the patient fell into the hands of the reporter [Dr. Chancellor]. Carbolic washes of the wound—

externally and by injections—were resorted to, and drainage by means of a gum catheter was adopted as the general line of treatment, with such supporting regimen as seemed required from time to time. In addition, treatment by position was followed out, so as to let either one or the other of the external wounds be dependent, and thus facilitate drainage. This plan of treatment was kept up for some weeks or two months, by which time restoration to health was rapidly advancing. The body was then noticed to be much “drawn” to the right side. Within a few months, however, the lungs were invaded by deposits, which appeared to be tuberculous, and the patient died. Still, the lesson learned from this case was “the value of drainage for gunshot wounds;” for the patient, after recovery from the wounds themselves, was able to ride about or go where he pleased; and while he did complain occasionally of “stitching pains” at the points of both wounds for some time afterwards, as well as “heavy pains” along the track of the wound through the lung, it was several months later that the tubercular trouble began. The Doctor *knew* nothing about the history of consumption in the family of the patient.

The other case bearing on this subject was that of a married lady, of some thirty years of age, from Texas, who, ten years ago, while dancing one of the round dances, as she professed, had her right side too much compressed. She was not “well” at the time of the dancing; but being fond of the amusement, she danced immoderately, whenever opportunity offered. But soon after the special dance referred to, she had hepatitis, followed by an abscess of the liver, which “pointed” on the left side, between the ninth and tenth ribs. An incision was made in the most dependent part, so as to evacuate the pus. After this, “a drainage position” was directed. Then a drainage tube was inserted, but it did not act well; it became clogged too frequently to accomplish the ends in view. In studying how to promote the discharge of purulent matter from the cavity of the abscess, he determined to resort to properly applied compresses. He adopted a specially prepared spring truss—the drainage tube being frequently taken out for cleansing purposes, and re-inserted. This treatment was kept up for a month or more, under Dr. Chancellor’s care, when she was sent to the Rockbridge Alum Springs, Virginia, where the resident physician, Dr. Samuel B. Morrison, followed out the same general line of treatment as had been pursued, chiefly draining locally, and tonics internally. She recovered her health perfectly, so far as is known, to this day.

Dr. Samuel C. Gleaves of Wytheville, addressing Dr. Chancellor in regard to the last-mentioned case.—“Was the drainage-plan of treatment the cause of the cure?”

Dr. Chancellor.—“Yes, I believe it was.”

Dr. Gleaves.—“If the pointing abscess had simply been lanced sufficiently at the most dependent point, and the proper position of the patient been ordered and followed out by the nurse, would not sufficient drainage have been kept up?”

Dr. Chancellor.—“Yes; but with the carelessness of nurse, or disobedience of patient, it is impracticable to depend upon the exact following out of such instructions. Of course, you must be careful, under such circumstances, to keep the incision wound open.”

Dr. Gleaves.—“What, then, is the use of the additional irritation caused by the insertion of a drainage tube?”

Dr. Chancellor.—“I do not admit that the proper introduction of a properly-devised drainage tube causes improper irritation. It frequently happens that the very irritation caused by the gentle introduction of a drainage tube into a deep abscess of any part of the body creates exactly that kind of “irritation” which is most desirable for repair of an indolent ulcer or abscess.”

In furtherance of these views, he mentioned the case of a man who was shot laterally in the knee-joint—the ball going through and through. Such cases generally end fatally, unless amputation of the thigh is undertaken; and even then many failures of success occur. In the case briefly reported by him, the drainage tube plan of treatment was adopted, and the patient thoroughly recovered, with the exception that he left with an ankylosed knee. “Was that not better than having either an artificial limb or an amputated thigh?”

Dr. Gleaves then referred to a case, some time ago under his charge, of abscess of the liver. After opening it, he could not get it to heal while pus was flowing from it, or while it was secreting.

A Member.—“Of course not. Ought to have inserted drainage tube, and thus have caused sufficient inflammatory irritation. Dr. Gleaves himself said ‘*ubi fluxus, ibi irritatio.*’ The flow ought to continue when there is no irritation, and for a stronger reason ought to continue while there is irritation of the abscess.”

Dr. Taylor, the author of the paper under discussion, referred to the autopsy of a case which had induced him to believe in drainage wherever there was deep-seated abscess, or even wherever a superficial one, of large size, with its external opening, was constantly clogged up. He believed in drainage, especially in all major operations. If position or the patency of the opening would not permit proper drainage of the foul matter—whatever that matter might be—then establish a means artificially for free drainage. If the chimneys of a closed house do not carry off the poisonous effluvia of a house, then let the doors and windows be opened. So in

regard to abscesses or poisonous effusions in the abdominal cavity. If the opening by the wound of entrance or exit is not sufficient to admit of drainage—the escape, indeed, of the poisonous secretion, whatever may be its character—then make an artificial opening intelligently, and keep in this wound a perfectly secure drainage tube—whatever may be the kind or the shape of the drainage tube required for the special case under charge.

REPORT ON ADVANCES IN Ophthalmology, Otology and Laryngology

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In the fields of ophthalmology, otology and laryngology much has been done in the last year or two towards the advancement of medical science. The results are, however, not seen in any specially brilliant discoveries, but in the gradual marching on towards the elucidation of obscure questions in physiology and pathology, and in improving methods of treatment and surgical appliances.

In ophthalmology, the investigations into the physiology of the eye (resulting e. g. in discovering, that the cornea derives its nourishment from the scleral vessels and discharges its waste products into the anterior chamber, contrary to preconceived ideas); into the pathology of sympathetic disease, and modes of its transmission; into the causation of glaucoma and methods for relief of its different forms; and into the connection between intra-cranial disease and optic neuritis, are of interest, not only to the ophthalmologist, but to all scientific medical men. The investigations into the alarming increase of refractive troubles, with their attendant evils, especially of myopia, or near-sightedness, during school-life, with a view of trying to regulate the schooling of our children by legislation or otherwise to the prevention of this danger to succeeding generations, are of interest to the public and profession alike. So, too, are the efforts of ophthalmologists to perfect methods of examination for color-blindness, and to secure legislation to eliminate that element of danger to the travelling public.

Unfortunately, the time at my disposal will not permit me to enter fully into these matters, interesting as they may be, as I wish to call your attention to a few points of every-day practical utility, though in so doing I hardly keep within the limits drawn for this paper by its title.

In *ophthalmic therapeutics*, I would ask your consideration of both some new and some old drugs.

First, in regard to the

MYDRIATICS, so-called, viz.: atropia, duboisine, hyocyaminé and homatropine.

Atropia.—For many years the first-named has been, I might say, the sheet-anchor of the oculist, as he used it in so many eye troubles. As a local anodyne it was applied to relieve pain and discomfort in the eyes; it is an important remedy in all diseases of the iris and cornea, in acute troubles of the inner coats, in paralyzing the accommodation to discover the state of the refraction, and, in weak solution, to dilate the pupil for diagnosis with the ophthalmoscope. Its disadvantages are, the danger of using it where there is a tendency to glaucoma, or in troubles threatening secondary glaucoma; and the annoyance resulting from its use in errors of refraction, on account of the duration of the effect, which sometimes lasts as long as a week or ten days; and the fact that some people manifest a decided idiosyncrasy against its use.

Duboisia.—With the discovery of duboisine a few years back, it was thought an efficient substitute for atropine, without its disadvantages; but the duration of its effect upon the accommodation is nearly as long as that of atropine, within the last year one or two cases of glaucoma following its use have been reported, and in some persons it produces a species of intoxication and mental aberration which is annoying, and sometimes alarming. I reported such a case two years ago, and have seen others since. Its only advantage seems to be that it may be employed where an idiosyncrasy against atropine exists, or where the latter produces no appreciable effect in diminishing the photophobia of some iritic and corneal troubles.

Later, sulphate of hyoscyamine and hydrobromate of homatropine (Ladenburg) were offered as substitutes for atropine. I have employed both of these, in determining refractive errors and for ophthalmoscopic diagnosis.

Hyoscyamine in a one-half per cent. solution (gr. ij-3j) paralyzes the accommodation very quickly, and its effect passes off much sooner than that of atropine or duboisine; and therefore, for diagnosis of astigmatism and other refractive troubles, it offers considerable advantages over these drugs, though I have seen it produce giddiness and a mild intoxication in a few instances.

Homatropine is more evanescent in its effects than any of the four my-

driatics mentioned—probably too much so to place sure reliance upon it in diagnosing errors of refraction; but it has its advantages for ophthalmoscopic purposes, as the pupil so soon returns to its normal condition after its use; it is, moreover, non-poisonous. Up to this time, I have seen no report of glaucomatous symptoms following the application of either hyosecyamine or homatropine.

The opinions of ophthalmologists are as yet somewhat at variance as to the relative merits of the new mydriatics, which, as far as I can judge from published reports upon their action, is probably due to insufficiency of data upon which to base conclusions. Further investigation alone will determine their merits. The same remark applies equally to the comparatively new

MYOTICS.—A few years back our only dependence as a myotic was the extract of calabar bean. Now we have the more active alkaloids, eserine and pilocarpine. Both contract the pupil—eserine, however, more powerfully than pilocarpine; and, moreover, both have become very valuable in other modes of application.

Eserine is used locally in acute glaucoma with good results in many cases (in chronic glaucoma it is useless), as a preventive of glaucomatous symptoms, in ulcers of the cornea, in serous iritis, and episcleritis; it comes also into play to antagonize the action of atropine and other mydriatics on the accommodation, and thus get rid of that annoyance following examinations for refractive errors.

Pilocarpine is used locally, internally and hypodermically, because of its stimulant and absorbent properties, and has been tried with varying success in exudative diseases of the retina and choroid, in vitreous opacities, in some forms of optic neuritis and commencing atrophy, and in retinal detachments. In this latter trouble, I have had some exceedingly favorable results, both in private and hospital practice. As an antidote to belladonna poisoning, it is superior to morphia. Locally, both eserine and pilocarpine are serviceable in paralysis of accommodation following scarlet fever, diphtheria, etc. All solutions of these drugs are best preserved by boiling, and adding carbolic acid in the proportion of one-half grain to the ounce.

Iodoform.—The use of iodoform in ophthalmic practice has greatly increased of late years. It is especially applicable to cases of granular conjunctivitis, trachomatous pannus, superficial ulcers and opacities of the cornea, and interstitial keratitis, in which troubles I have found it a very satisfactory remedy. It seems especially to control purulent and muco-purulent secretions from the conjunctiva, and is, therefore, useful whenever these are present. It is employed either as a fine powder dusted into the

eye, or as a salve made up with vasaline in varying proportions from 7 to 30 per cent. of iodoform.

Boracic acid is a comparatively recent addition to both ophthalmic and aural practice. It is used in the slighter inflammations of the conjunctiva, either with or without some mild astringent. It is employed in the strength of from one to four grains to the ounce of water.

The mention of *astringents* reminds me that some reform in their application to eye diseases is still needed among a considerable number of our profession at large. There is no doubt that their use—especially that of *nitrate of silver*—is much abused. I have seen prescriptions for from 10 to 60 grains to the ounce of water, with directions to be dropped into the eyes—even in cases requiring only the mildest of astringents. I have seen eyes irretrievably damaged by its use. I was an eye-witness of an application of pure nitrate of silver to the everted lids—a rather heroic and dangerous proceeding for the patient's eyes. Oculists employ it most carefully, and rarely entrust it in the patient's hands, except in very weak solutions. Why should they, when they can prescribe alum, zinc and other astringents without running the same risks? Even these are usually given only in weak solutions, as their frequent application will do as well as the occasional use of stronger preparations, without causing as much discomfort. When necessary to use nitrate of silver in greater strength, it should be applied to the everted lids, either in solution with a camel's hair brush, or by means of the mitigated stick, and neutralized with salt and water before the lids are turned back.

Lead salts, which were formerly in such general use, should be entirely discarded, as they do not serve any better purpose than other astringents, and you run the risk of leaving indelible spots on the cornea if there are any abrasions of its surface.

Antiseptics.—The question of antiseptics in ophthalmic surgery has been much discussed in the last few years, more especially in its applicability to the extraction of cataract. After a careful analysis of what has been written upon the subject, and some experimentation in my own practice, I have concluded that the use of antiseptics is a very troublesome and useless addition to the after-treatment of cataract cases. If the instruments, the hands of the operator and assistants, and the face of the patient be scrupulously clean, and the conjunctival and lachrymal sacs free from muco-purulent inflammation, all is done that can be accomplished by a troublesome mode of antiseptics. In some special cases, the free use of a saturated spray or solution of boracic acid may be indicated, and will improve the chances of good results. In addition, clean linen, absorbent cotton or charpie, and clean bandages, are necessary. I think the best results are to be looked for after cataract extraction by giving careful attention to

the physical condition of the patient in advance, and preparing him for operation by a judicious prior treatment; by estimating the condition of the lens and size of the nucleus, upon which depends the kind of section and operation to be made; and by being careful to leave a perfectly clean wound free from iris, fragments of capsule or cortical substance. I think the *peripheral section of the capsule* lessens these latter risks. This, followed by frequent changing of the dressings without disturbing the eye, unless the appearance of the lids or the secretions calls for an examination, is all that is needed to ensure a successful result. The peripheral section of the capsule, mentioned above, is a recent addition to our operative procedures, and its benefits have been best demonstrated by Knapp; but it probably necessitates a greater number of secondary operations, the so-called "tearing the capsule," and this is best performed by Knapp's cutting needle than by the old "tearing" process.

Optico-ciliary neurotomy.—This comparatively recent operation is still on probation. Some oculists, because of a few failures, condemn it; others laud it for the contrary reason. Objections, the truth or fallacy of which time and experience alone will demonstrate, are urged against it. From a cosmetic point of view, it is a great improvement on enucleation, if it really gives the same immunity against sympathetic disease. When the injured eye, even if the sight is entirely destroyed, is still a nice looking organ, it is certainly better than an artificial eye, and should be preserved, if possible. In thus cutting the optic and ciliary nerves and making the eye-ball anæsthetic, *if it remains so*, this object is accomplished. If sensibility returns, I think the eye should be enucleated. I have had both results—some where the cornea lost entirely its sensibility and remained thus; others, where the sensibility returned, and I was obliged to remove the eye.

A short time ago, I was obliged to enucleate the eye for another cause. A young lady in Richmond, who had been injured in the right eye when a child, came to me last May suffering from sympathetic irritation in the other eye. I explained to her the trouble and the necessary treatment. She requested me to try and save the eye, if possible, even though the trial might result in failure. I performed optico-ciliary neurotomy by the method I suggested at our last annual meeting, and it was easily and quickly done. There was considerable hæmorrhage, with protrusion of the eye and after-pain. The following morning the eye looked well, the lids closed over it easily, there was no pain, and I looked for a favorable result, as the cornea was perfectly anæsthetic. Two hours after my visit, I was sent for, and on my arrival found that a secondary hæmorrhage had taken place, and the eye was much protruded. Five hours later, another hæmorrhage took place, with increased exophthalmos and violent pain. She passed a wretched night, and at 11 A. M. the next day a third hæmorrhage occurred, with protrusion of the whole eye-ball beyond the lids, which were much swollen and œdematous. The pain was agonizing, and was controlled

by morphia injections. The next day, the third after the operation, the cornea was clouded, and a small, gangrenous spot appeared on the conjunctiva. As there was every probability of general slough of the cornea from its low state of vitality, I removed the eye. I found the whole orbit filled with an organized blood clot, which, by its pressure upon the bleeding vessels, prevented further hæmorrhage.

This is the only case in my own experience in which such hæmorrhage resulted, either after neurotomy or enucleation. Had the latter been performed at first, I believe uncontrollable bleeding would have been the result. The eye remaining *in situ* acted as a compress, and prevented any dangerous loss of blood. I mention this case because it was, to me, an instructive one, in regard to the operation.

I have hardly space to dilate upon other efforts to improve modes of treatment of eye-disease—such as the use of the actual cautery in ulcers of the cornea, in galvano-puncture in detachment of the retina, of nerve-stretching for orbital neuralgia, of extraction of steel and iron from the eye by the magnet, etc. Of one, however, of the published new methods in the last two years, viz. : the *use of electricity for the cure of cataract*, all I can say is, that it must have been the offspring of a too vivid imagination or the effort of charlatanry to attract public attention, as it is an absurdity upon its face, and unworthy of discussion.

OTOLOGY AND LARYNGOLOGY.—If by *otology* we mean the science of ear diseases, and by *laryngology* the science of throat diseases *in toto*, we can hardly separate the two, as each has such intimate relation to, and bears upon one another. If, however, by laryngology we mean only diseases of the larynx, then otology and laryngology are separate and distinct studies. But in the event of this strict interpretation of the latter term, we would be obliged to look for a term to signify the throat and nose troubles which are so closely associated in our clinical experience with ear diseases, such a term, for example, as *pharyngology* or *rhinology*, or better still, *rhino-pharyngology* would have to be framed. The more general recognition of the intimacy between ear and throat in the treatment of ear disease, has been one advance of late years. Most of the text-books on the ear, whilst recognizing the connection *anatomically*, did not seem to do so *clinically*, as the treatment of the throat troubles (which, in most cases of middle ear disease, are really the causes of the latter) was either entirely ignored or glanced at in the most superficial way.

When we look at the progress of *otology* in the past year or two, we are struck with the number of physiological and pathological investigations of the labyrinth and accoustic nerve trunk, with the result that, although much work of scientific value has been done—work which is a reliable foundation upon which to base clinical diagnosis—very little has been accomplished towards a practical elucidation of its diseases or their treat

ment. Investigations into the cause of aural vertigo and the functions of the semi-circular canals, have been made with varying success—some investigators arriving at different conclusions from others. The effect of syphilis upon the ear, and the pathological changes therefrom, have been carefully observed, with resulting additions to our knowledge thereof. But the obscurity that hangs around inner ear diseases has not yet been dissolved—our knowledge of them being as yet in its infancy.

But when we look at the middle and external ear, we get into clearer ground where the work has been followed by more practical results.

In regard to *purulent disease of the ear*, it has been discovered that, as in other purulent troubles, a process of fermentation takes place, and cocco-bacteria have been found in the secretions. Consequently, the best treatment is an antiseptic one, with thorough cleanliness and exclusion of the air. In most cases, some mild astringent is combined with the antiseptic, such as boracic acid, in the form of a *hyper*-saturated solution in alcohol, or still better, in fine powder, with oxide of zinc or alum. The latter should not be used when caries is present, as it is apt to increase the discharges. In a few cases, caustic applications may be required. After making a plentiful application of powder with a powder-blower, a pellet of absorbent cotton should be applied, in order to exclude the air and keep the parts dry. As the discharge ceases, the pellet may be modified in size, and so applied as to take the place of an artificial drum-head; then, in addition to its therapeutic value, it improves the hearing, and the patient can learn to apply it for himself. According to the quantity of discharge or irritability of the parts, it is changed every day, every few days, or every two or three weeks. The cotton pellet, as an artificial drum-head, is superior to the old style rubber disks with wire attached, which were difficult to adjust and often caused irritation of the remnant of the drum-head and of the drum cavity. It is, of course, understood that any kind of artificial drum-head is of value only when there has been partial or complete destruction of the normal tympanic membrane. This should be borne in mind, as many of your patients have been victimized by the patentee or vendors of the "artificial drum," so-called, which is represented in the advertisements "to restore the hearing," irrespective of the cause of the deafness. When polypi are present, *alcohol*, with or without boracic acid dissolved in it, is probably the best application in the absence of the means of operation.

Mastoid disease, the most lamentable and dangerous result of purulent ear troubles, has received more attention. Close observation has been given to its treatment, and the indication for trephining the bone are more clearly

understood. As you are already aware, unless prompt relief is given in this disorder, it is likely to result in death from brain complications.

When we come to *chronic non-suppurative middle ear disease*, we are necessarily led into the consideration of pharyngeal and nasal troubles, which, as above observed, nearly always complicate it, and, in the majority of cases, are the direct cause.

The treatment of the various thickenings, granulations, adenoid growths, hypertrophies, etc., in the naso-pharynx is, in most instances, the first step towards ridding our patient of chronic ear troubles. Hypertrophy of the erectile tissues over the turbinated bones has been demonstrated to be an important factor in this connection, and its influence upon the progress of naso-pharyngeal and aural catarrh has been much discussed. This I consider one of the most important advances that has been made of late years in this department of surgery.

Anterior and posterior *rhinoscopy* is all important, both for diagnosis and treatment. Various remedies and different instruments have been suggested for the destruction of these hypertrophies, and not only the soft tissues must be removed, but sometimes even part of the bone itself. The most useful apparatus for their removal is, in my opinion, the simply-devised snare of Dr. Jarvis', which I have already shown you; but the galvano-cautery is coming more and more into use for their treatment, and much ingenuity has been shown in devising suitable attachments for working in the confined space of the nares, the best of which are probably those of Dr. Shurley, of Detroit. Another cause of naso-pharyngeal and resulting aural catarrh, and which only very recently has received proper attention, is a deflected septum which produces these unfortunate results by impeding the nasal current of air, and by acting as an irritant to the mucous membrane. Various methods have been suggested for operating on this deflection by perforating the septum and attempting to restore it to the median line with plugs; by removing the deflected portion, especially if there is any hypertrophy of its tissue; or by a regular plastic operation of cutting away a piece of the septum and co-aptating the parts with sutures so as to restore it to its normal position. Nearly always hypertrophy of the middle turbinated bone of the opposite nostril complicates the deflection of the septum, and this hypertrophy should be corrected by operation at the same time or before the septum is operated on.

These nasal obstructions have also been shown to be a frequent cause of asthma, and with their removal the asthma disappeared. It is, therefore, important in cases of so-called asthma to make a careful rhinoscopic inspection to see what symptoms of naso-pharyngeal disease may be present. The above, also, applies to many cases of so-called chronic laryngitis, of

paroxysmal and spasmodic cough, and of partial loss of voice, where these effects are secondary to and dependent upon the naso-pharyngeal trouble, and which disappear when the latter is properly treated.

In regard to strictly *laryngeal* diseases, much attention has been given to their better classification and the recognition of their diagnostic signs; towards improving the means and apparatus for inspection, the methods of treatment and the application of remedies; and to elucidating the causes of the various laryngeal paralyses by experiments and investigations into the mechanism of the laryngeal muscles in the production of the voice in speaking and singing.

In this field, *the importance of a familiarity with the use of the laryngoscope* for diagnosis and treatment, is becoming more widely recognized by the profession, and in some of the medical schools it is a requirement for graduation as much as the use of the stethoscope. The absurdity of attempting to make applications to the larynx without using the laryngoscope (*i. e.*, of applying a remedy you don't know *where*, for you don't know *what*), is self-evident, although it is done every day. In loss of voice, it is only by the mirror we can determine the cause, and it is called also of incalculable advantage in cases of foreign bodies in the windpipe, as intra-laryngeal methods for removal should always be attempted before opening the trachea.

Tracheotomy.—As to the latter operation, every physician or surgeon, whatever his special line, should be ready to perform it at very short notice, as its urgency is often so great that no time should be lost in looking for one specially skilled in such work. This operation has also been utilized in that distressing disease “*phthisical ulcerative laryngitis*” to relieve the dyspnoea, and in some cases it has been claimed to have been the means of curing the local disease by the *rest* thus given to the ulcerated parts. I operated on such a case a year or so back, when tracheotomy was imperatively demanded, and the insertion of the canula was followed by rapid improvement of the local trouble, and the ulceration healed entirely, although the patient subsequently died of lung disease. Such cases open to discussion the question whether the ulceration was purely catarrhal or whether it was tuberculous in its character.

The presence of *erosions* or *superficial ulcerations* in catarrhal laryngitis is an undoubted fact; but as far as my limited experience goes, deep-seated ulceration, with necrosis of tissue, is the result of some dyscrasia. There are those, however, who believe in the existence of the true catarrhal ulcerative process in the larynx, independent of any constitutional cause, and I think the question an open one.

In thus closing this short notice of what has been done in my special

field of work, I regret that time did not permit me to dilate more fully upon some points merely mentioned ; but I trust my report will awaken in our Society the same interest in these departments of medicine and surgery as it has already manifested in others.

410 E Grace street, Richmond, Va.

DISCUSSION.

In response to an invitation, Dr. John N. Mackenzie, of Baltimore, Fraternal Delegate from the Medical and Chirurgical Faculty of Maryland, in referring to the report presented by Dr. White, said that the great difference of opinion which prevailed in regard to the cure of *throat consumption* arose from the confusion of two distinct forms of ulceration which are met with in the larynx of the consumptive. The classification into catarrhal and tubercular phthisis held here as in the lungs ; and by making such a division, order would be restored to the conflicting opinions of authorities, and a standpoint would be secured for a scientific solution of the various problems which the subject presented, and a guide to prognosis afforded of considerable value to the practical physician. The chronic, ulcerative laryngitis of the tubercular patient differed from simple chronic laryngitis in its extreme chronicity, its tendency to relapse, and the frequent occurrence of ulceration which showed no disposition to cicatrize, and which, if neglected, would eventuate in laryngeal phthisis, although proof of its culmination in tuberculosis was wanting. He believed that the vast majority of reported cases of so-called laryngeal tuberculosis could be referred to the category of catarrhal inflammations. The plan of treating this variety of laryngeal phthisis by thorough local cleansing and disinfection, followed by the direct application of iodoform and morphia to the ulcerated areas, had met with success in his hands ; and he considered this method of grappling with the disease as one of the greatest advances which had been made in the control of this troublesome disease. The second form of ulceration—the true tubercular—was much more difficult to deal with ; but the fact that pulmonary consumption was curable, the well-known cicatrization of the local lesions of tuberculosis of other organs, as the intestines, and the excellent results which had followed incisions and drainage of pulmonary cavities, would lead, *a priori*, to the possibility of similar success in the treatment of laryngeal phthisis. The laryngeal ulcer is the pathological analogue of the cavity in the lung ; and it, therefore, would be equally applicable to the former, especially as in this case local treatment would be more effectually carried out. Dr. Mackenzie recommended the constant inhalation of medicated vapors as an adjunct to the treatment, and described the methods in general use. He also spoke of a

device which he was in the habit of using, namely, the substitution of cotton pellets in the nose for the cumbersome respirators sold in the shops.

Passing then to the subject of *nasal catarrh*, Dr. Mackenzie warmly advocated its treatment by surgical methods, especially the removal of the hypertrophied tissues covering the turbinated bone, the excision of the pharyngeal, and, if necessary, the faucial tonsils, and he related cases in support of operative interference. As a substitute for surgical operations for the straightening, perforation or fracture of the deflected septum, Dr. Mackenzie suggested the removal of one or more of the turbinated bones. He concluded his remarks by cordially thanking the Society for its courteous invitation, and for the attention with which the members had listened to his crude ideas.

EX-PRESIDENTS' PRIZE.

SURGICAL PRIZE.

Recent Progress in Abdominal Surgery.

By HUGH M. TAYLOR, M. D., Richmond, Va.

Statistics have shown that 92 per cent. of the patients operated upon for ovariectomy recover. Operative interference into the peritoneal cavity has consequently lost much of its former terror, and surgeons are now emboldened to resort to it for the relief of many cases heretofore considered beyond their aid. In this new and unexplored field we find surgeons achieving success where attempts a few years ago would have been considered beyond the pale of rational and justifiable surgery. Startling innovations are of every-day occurrence, and the great activity in abdominal surgery bids fair to place it on a level with any other department of the healing art. It was a natural inference, and one which has now been substantiated by much clinical experience, that the conditions which favor success after ovariectomy must, in a great measure, favor success after operations upon other abdominal organs, and after operative interference in gunshot and other peritoneal wounds. Within the boundaries of this extensive and important field of operative surgery, we find ovariectomy; Battey's operation; extirpation of the uterus, spleen and kidney; resection of the stomach, bladder and intestines; operations for pelvic tumors and abscesses; and last, but by no means least in importance, operative interference in intussusception, occlusion, and cancer of the intestines, and in gunshot and other wounds of the abdomen and abdominal viscera. Prominent among

many who have contributed to its advance may be mentioned Tait, Thornton, Billroth, Keith, Wells, Sims and Thomas.

Lawson Tait has perhaps done more to advance the subject of abdominal surgery than any man living. He reports one case of enlarged cyst of the liver, six cases of cyst of the kidney, one case of abscess of the spleen, twelve cases of abscess of the pelvis, four cases of suppuration of the Fallopian tube, and six cases of tubal pregnancy. Since 1879 he has performed Batley's operation seventy times, and has removed the ovaries twenty-six times to control dangerous uterine hæmorrhage. He expresses the sweeping opinion that every clearly non-malignant tumor of the abdomen or pelvis which endangers and renders life unbearable should be regarded within the province of safe abdominal surgery. He urges the importance of operating early, the advantages of the median incision, and the necessity of guarding against the escape of visceral or abnormal contents into the peritoneal or pelvic cavities. Complete isolation of the patient he earnestly enjoins, and is of the opinion that the use of carbolic acid in peritoneal surgery is dangerous and Listerism useless. Billroth, especially, has added to his reputation by his exploits in abdominal surgery, while Thornton, Keith, Wells, Sims and Thomas have rendered their names as familiar abroad as at home.

Kidney.—The field of operative interference in surgical diseases of the kidney has, of late years, been very much widened. The conditions demanding operative interference are wounds of the kidney, floating kidney, pyonephrosis, pyelitis, calculus, cysts, hydronephrosis, and the cases of tumors and fistula connected with the ureters, provided life is endangered, and one organ only is the subject of disease, and that of a non-malignant or tuberculous character. The operations called for by these conditions are nephrotomy (incision into the kidney), nephrectomy (extirpation of the kidney), and nephro-lithotomy* (incision, with removal of stone from the kidney).

It is now pretty generally conceded that *extirpation of the kidney* is justifiable, and entitled to be received as one of the established operations in surgery. In 1869, the late Prof. Simon, of Heidelberg, first demonstrated beyond all doubt that the kidney could be successfully extirpated. In twelve years the number of cases has been increased to 100, and the death rate has proportionally decreased. A tabulated report of 100 cases, the largest recorded up to August, 1882, shows 45 deaths and 49 recoveries,

*Hippocrates "recommends the removal of calculus when large and firmly lodged in the kidney, by incision; adding probably in apology for the daring of the procedure, that otherwise there are no hopes of a cure, and that the disease must prove fatal."—Miller's *Principles of Surgery*, 1852, p. 21, 15th line from bottom. It is evident that nephro-lithotomy is also an old operation, with additional interest attached,

with six cases still under observation. Nephrectomy may be accomplished by lumbar or abdominal section. The former is suitable for the immovable and the latter for the movable kidney. To the class designated *immovable* belong kidneys which are firmly attached, pyonephrosis, pyelitis, fistula of the ureters, wounds and small tumors of the kidney; while to the class designated *movable* belong the large cysts, floating kidney and other similar neoplasms. Of 76 cases, 36 were by lumbar section and 33 by abdominal section. Of the former, 14 died—a mortality of 33 per cent. Of the latter, 19 died—a mortality of 60 per cent. While the results, as thus shown, have been better after lumbar section, the choice between the two methods is still an unsettled point.

In *nephrotomy*, we recognize an old operation, but one with great additional interest attached. It is a safe expedient, and, as clearly shown by the results, it is capable of accomplishing great good. It has been your Reporter's privilege to see one case of pyonephrosis successfully treated by nephrotomy. The case occurred in a young man whose family history showed a marked tendency to nephritic disease. His father was at the time insane from Bright's disease, and his mother was an imbecile from the same cause. Both have since died. The patient and a brother had been operated upon for stone in the bladder by Dr. McGuire. The symptoms of pyonephrosis came on rapidly, and were well-marked. On making a lumbar section, a quart or more of offensive purulent matter was evacuated. The kidney tissue was found entirely disintegrated. Only what appeared to be the distended capsule remained. A drainage tube was introduced, the cavity of the abscess flushed out, the wound kept open for months, and the patient finally made a good recovery.

Uterus.—Removal of the uterus for cancer is a question open to discussion—one which future experience must, in a great measure, decide. No operation in surgery has worthier advocates, and as equally worthy opponents. In addition to the danger of the operation, must be considered the liability of the disease to show itself in other parts of the body. Until there is unity of opinion concerning operative interference in cancer, there must be diversity of opinion concerning extirpation of the uterus for this malady. How far we are justified in withholding the benefits of this operation, becomes a question of serious import and responsibility. As dangerous as it is, to withhold it under some circumstances is but to incur greater danger. In spite of the gravity of the undertaking, statistics tend to prove that the operation is entitled to the earnest consideration of even the most conservative surgeon. It is claimed that it offers some prospects of cure, and a chance of prolonging life in cases which are totally devoid of hope without operative interference.

Future experience must also decide between the relative safety of the va-

ginal and abdominal route. Freund has perhaps contributed more to the advancement of this department of abdominal surgery than any man living. From his own experience, and from the works of others, he concludes that the operation is not more dangerous than many of the major operations in surgery, and may be undertaken with a fair prospect of radical cure. The vaginal or the abdominal route must be decided upon according to the individual case. "If the uterus is very large and the vagina very narrow, the abdominal total extirpation must always be undertaken. With a small uterus and capacious vagina, the vaginal operation is best. The former, however, has the advantage that the operator is always sure of removing all of the cancerous tissue." It is the opinion of most authorities that the uterus which is movable can, with more safety to the patient, be removed *per vaginam*. It is claimed that the os, neck and lower portion of the body of the uterus are most frequently the seat of cancerous disease. It is further claimed that perfect drainage is more surely attained when the vaginal route is practiced. All admit the necessity of guarding against septic infection; and many confidently predicting its more universal acceptance, look forward with hope to the time when the details of the operation will be better understood. From a record of 94 cases by abdominal incision, we find but 24 recoveries; from 41 by the vaginal route, 29 recoveries.

Extirpation of the uterus is often called for in cases of fibroid, ovarian, and fibro-cystic tumors which are firmly attached to the uterus. If life is endangered or rendered unbearable, a resort to this expedient is urgently called for, and is considered fully justifiable. When practiced as a last resort, few, if any, surgeons now deny its necessity and advantages. Dr. T. Gaillard Thomas recently remarked, "That the surgeon who was not prepared to remove the uterus for certain kinds of uterine tumors, was not prepared to do his duty."

Abdominal section for the removal of sub-peritoneal myoma, fibroma, and other abdominal and uterine tumors is one of the most important questions which has been forced upon surgeons by the recent advances in abdominal surgery. When these tumors are pedunculated and free from extensive attachments, their removal is not so serious an undertaking; but if the adhesions are extensive and firm, their separation becomes a difficult and hazardous task. It is where these tumors are firmly attached to the uterus that it is safer and easier to remove the uterus with the tumors rather than attempt to separate them.

The recent progress in abdominal surgery has created a greater interest and activity in the Cæsarean operation. Its more frequent performance under better known rules applying to all abdominal surgery, will, it is predicted, change its statistics for the better. Porro's and Müller's modifica-

tions are new features in this operation, and constitute an advance of a very marked character. In *Porro's operation*, the abdomen is opened, the uterus incised and delivered of its contents. The emptied uterus is next pulled through the abdominal incision, and the body amputated from the neck. The neck is treated as a pedicle in the lower angle of the abdominal incision. *Müller's modification* consists in pulling the uterus through the abdominal incision before it is incised and emptied of its contents, and in clamping or ligating the neck before the body is amputated or incised.

Dr. R. P. Harris, of Philadelphia, reports five cases of Cæsarean section in the United States for 1880, of which three women and four children were saved. During the same year, Italy saved four Porro cases out of eleven; Germany two out of five; Austria three out of three; and France one out of two. In the hospitals of Vienna and Milan six women and six children out of six cases have been saved.

Another important substitute for the Cæsarean operation is *gastro-elytrotomy*. While not of recent birth, it is of recent growth into importance, and as its recent growth has been started by Dr. T. G. Thomas, of New York, its progress will be watched with special interest by American surgeons. It is acknowledged by the best authorities that this operation has a grand future before it. If its successes in the future fulfil its promises of the immediate past, Cæsarean section must yield the palm to gastro-elytrotomy. The operation, as practiced by Dr. Thomas, consists in making an incision from the symphysis pubis to the crest of the ilium parallel to and just above Poupert's ligament. The peritoneum is carefully lifted out of the way until the vagina is reached. The vagina is next opened with the knife, but only enough to admit two fingers. The opening is then torn sufficiently to effect delivery. The vagina is torn because it bleeds less than when it is incised. It has been advised to open the vagina with a cautery knife. It is claimed that by gastro-elytrotomy we substitute an extra-peritoneal for an intra-peritoneal operation. It is less dangerous to incise the vagina than the uterus, and as the peritoneal cavity is not opened, drainage is better secured, and septic infection less frequently results. The operation is not difficult to perform, and, as is shown by the results, is not so fatal to either mother or child as Cæsarean section. The cases in which this operation is not called for are those in which the obstruction is in the vagina and not the pelvis. It is also thought to offer a good substitute for some cases calling for craniotomy.

When *rupture of the uterus* occurs during labor, and the child or placenta is in the peritoneal cavity beyond reach *per vaginam*, nothing is so imperatively called for as abdominal section, and few operations promise more honor to the surgeon and benefit to the patient. If the rupture in

the utero-vaginal or uterine wall is small, and the child and placenta are delivered *per vaginam*, then the indications are to secure perfect drainage of the peritoneal and pelvic cavities. This is best accomplished by introducing a drainage tube through the uterine rent, and, if necessary, by flushing out the cavity of the peritoneum with some antiseptic solution. This treatment constitutes an advance of a most marked character, and the number of cases which have been successfully treated in this way is its highest commendation.

The proper *treatment of extra-uterine pregnancy* is a subject which is attracting a great deal of attention at this time; and while the management of tubal, intestinal, and abdominal pregnancy is still an open question, there is a strong inclination to resort more frequently to early operative interference. It is generally admitted that this operation is yet in its infancy, and that a great many disputed points relating to diagnosis and treatment must be settled before any fixed rules governing the treatment of such cases can be decided upon. The cases suitable for operative interference, the time for operative interference, and the proper treatment of the placenta, are among the most important unsettled points. Dr. T. G. Thomas, in a recent paper upon this subject, says: The placenta should not be removed by the operator. Nature can and will expel it with less danger to the patient. In order to secure this end, the abdominal incision should be left open. Drainage tubes and antiseptic washes into the cavity are, he thinks, indispensable. In discussing the paper by Dr. Thomas, Dr. Barnes, of London, agreed that the placenta should be left *in situ*, as advised by the late Dr. Ramsbotham; but was of the opinion that the wound should be closed, and only opened when septic symptoms showed themselves. Earlier operative interference, in the opinion of many, gives promise of better results. Many cases, it is thought, are fatal through delaying operative interference too long. Your Reporter recalls one case of abdominal pregnancy in which operative interference was refrained from until pyæmia had rendered it a hopeless undertaking. Lawson Tait reports six successful laparotomies for tubal pregnancy. The statistics available do not warrant us in drawing positive conclusions from them.

Intestinal obstruction, cancer and perforation.—In no department of abdominal surgery is the advance of the present over the past more marked than in the more frequent performance of abdominal section for the relief of intestinal obstruction. Statistics do not warrant us in classing this among the safe expedients; but as the operation is so often refrained from until all other known curative or palliative means have failed, until the resources of the patient are exhausted, and not until death seems imminent little better results should be expected; and it remains to be proved that the palliative or do-nothing plan of treatment presents statistics more fa-

avorable. When other expedients have failed, the indications are so plainly in favor of operative interference that the surgeon who hesitates assumes a grave responsibility. It is confidently predicted that, when earlier operative interference is resorted to, more confidence in the operation will be established, and far better results will be secured. These conclusions are not accepted by some over-conservative surgeons; others accept them with hesitation; while others are very earnest in advocating early operative interference. It is easy to see, from the current of thought, that this procedure is becoming more and more favorably looked upon; and it is safe to predict, in consequence of the attention which it is now receiving, a greater advance in the near future. Operative interference in *external strangulated hernia* is not more imperatively called for than operative interference in *internal hernia*. The difficulty of making a diagnosis until too late to do good has greatly retarded the advancement of this department of abdominal surgery. It is predicted that the surgeon whose researches shall throw most light upon the question of a clear and early diagnosis, will contribute most to its advancement. A successful laparotomy in a case of *acute intestinal obstruction* is reported by Dr. Harry T. Estill, of Tazewell C. H., Va. It is my pleasure to give prominence to the report and credit to the reporter of this case. In a paper published by Dr. Ashhurst, we find a report of thirteen cases of acute obstruction from intussusception, of which eight died and five recovered after operative interference. In the same paper, there is a report of fifty-seven cases from other causes than intussusception, with eighteen recoveries. Ashhurst favors operative interference after four days of unsuccessful palliative treatment. In *rupture of the bowels* from blows, falls and penetrating wounds, a fatal issue may so generally be expected that we are advised to open the abdomen, check hæmorrhage, sponge out the peritoneal cavity, sew up the rent, and provide for drainage. With the light now before us, we must realize that such cases are not beyond the legitimate province of abdominal surgery, and the same conclusions hold true in ruptures or wounds of the liver, spleen, stomach, kidney, ureter, gall-bladder, urinary-bladder and uterus. In cases of *perityphilitic abscess* resulting in intestinal ulceration and perforation, there is the strongest possibility of good resulting from abdominal section and drainage; and the same treatment may, with an equal prospect of success, be applied to abscesses in any part of the peritoneal or pelvic cavities, or in any of their contained viscera. In *perforation of the intestine* from other than traumatic causes, the benefits from abdominal section will, it is predicted, open up a new field for operative surgery. As soon as a diagnosis is made, and a fatal issue is apprehended, we are earnestly advised by many prominent writers to make an exploratory incision, check hæmorrhage, and, if possible, effect sutural repair of the injury done, or at least provide for free

drainage, without which the probability of recovery is very small. Abdominal section for the removal of foreign bodies in the stomach or intestinal canal, is also one of the questions forced upon surgeons by the recent advances in abdominal surgery. When practised as a last resort, there is almost unity of opinion in its favor. Dr. Pooley, of New York, has reported ten recoveries out of eleven gastrotomies performed for the removal of foreign bodies.

No new operation in abdominal surgery has excited more interest, gives greater promise of good, and reflects more credit upon its originator, than the operation of *gastro-enterostomy*. As suggested and practised by Wölfler, Billroth's clinical assistant, it consists in making an artificial communication between some portion of the small intestine and stomach. It is adapted to those cases of stenosis of the pylorus and upper duodenum which have heretofore been treated by simply establishing a fistula; but more frequently suffered to die without surgical treatment of any sort. After this new operation, the gastric, pancreatic and biliary secretions perform their proper functions, and no special preparation of food is necessary.

Mr. Thomas Bryant recently reported to the Royal Medical and Surgical Society of London a case of *stricture of the descending colon*, which was relieved by excising the strictured portion of the bowel. An incision was made as in performing left lumbar colotomy. The bowel was then pulled through the incision, the strictured portion excised, and the severed ends of the bowel stitched to the wound. This operation can only be practiced when the strictured portion of the bowel is movable. If the bowel is not movable, the old operation of left lumbar colotomy is called for. When it was first known that Billroth had excised a portion of the pylorus for cancer, his boldness was very much criticized. The recovery of his patient from the operation demonstrated its feasibility, and brought about great activity in this department of abdominal surgery. Billroth's patient recovered from the operation, but in six or eight months died from a return of the cancer. A post mortem examination revealed this fact, and also that the stomach showed no evidence of the operation. The duodenum was stitched to the lesser curvature of the stomach. No stenosis was found at the point of its attachment, and no digestive troubles supervened. Dr. Henck, of Heidelberg, has tabulated the clinical history of twelve *resections of the stomach*. Eleven were for the removal of cancerous growths; four of these recovered from the operation, and three are still alive; the fourth is known to have died four months after the operation from a return of the cancerous disease. The twelfth case also recovered. This was performed in a case of stricture of the pylorus following perforating ulcer. It is claimed for this bold operative procedure that it offers a slight chance

of radical cure, and that it offers a good chance of prolonging and rendering life more comfortable. It is generally admitted, however, that this operation is still within the domain of experimental surgery.

Batley's operation.—Few, if any, surgeons now deny that there is a field for Batley's operation. The question as to the proper limits of this field is, however, unsettled. Batley suggests the following questions to be asked in each case; and unless they can be answered in the affirmative, he advises against operative interference: "1. Is this a grave case?" "2. Is it curable by any of the known resources of art?" "3. Is it curable by the change of life?" It has been practised in ovarian prolapse, in ovarian dysmenorrhœa, in epilepsy, and insanity with monthly exacerbations, to control the growth of uterine myomas, and to check dangerous uterine hæmorrhage. It is also called for when there is an absence of the vagina, which is dangerous to life, and when there is deformity of the uterus or vagina, which endangers life, and is not restorable by other means. It is pretty well settled that the ovaries should be removed by abdominal section. To secure the full benefits of this operation, all admit the necessity of removing both ovaries, and Lawson Tait urges the necessity of removing also the Fallopian tubes. His experience leads him to think that the removal of the ovaries alone is not sufficient to bring about the change of life, but that the removal of both ovaries and Fallopian tubes does secure this end. The mortality of this operation in his hands has been only from 3 to 14 per cent., according to the class of cases. Your Reporter has had the opportunity of observing the effects of this operation upon three cases; and while all of these recovered, the impression has been left that the operation is often difficult to execute, and is not exempt from the dangers common to abdominal surgery. It is settled that in no sense of the word is a woman unsexed by this operation. None of the womanly attributes of mind and body are lost, and sexual desire is retained.

Ovariectomy.—In ovariectomy we recognize the greatest triumph of abdominal surgery, and to its teachings is due the present activity in all peritoneal surgery. It is now settled that existing pregnancy and peritonitis do not offer obstacles to the successful performance of ovariectomy. If, after successful tapping, or from any other cause, suppuration is set up, operative interference is at once indicated. All hæmorrhage must be controlled. The means for effecting this are pressure, ligatures, pressure forceps, and last, but by no means least in importance, hot water. The edges of the peritoneal incision should be as closely approximated as possible. The mass of opinion is, I think, in favor of early operative interference. There is still great diversity of opinion concerning the relative advantages of the intra- and extra-peritoneal methods of treating the pedicle. With many the clamp still finds special favor, while others use exclusively the

cautery or ligature. In deciding the merits and demerits of Listerism, I think the professional thought has been distracted from this point. I have seen fit to allude only to the debatable questions connected with Battey's operation and ovariectomy. No division of our subject merits a more thorough notice than the influence upon ovariectomy of Listerism, antiseptics and drainage. If it can be shown that they influence the mortality after ovariectomy, it must follow that their influence extends to other operations in the peritoneal cavity, and to operative interference in gunshot and other peritoneal wounds.

At the last meeting of the International Medical Congress, there gathered the giant intellects of our profession from all quarters of the globe, and upon no subject was there more interest and greater diversity of opinion expressed than upon the relative value of *Listerism, antiseptics and drainage* in abdominal surgery. It had been heralded far and wide that Keith had performed ovariectomy eighty times without the occurrence of a single death, and that he attributed his unparalleled success to the use of Lister's method. When Keith announced the fact that he had wholly abandoned Listerism in abdominal surgery, and looked upon it as one of the grandest scientific bubbles ever burst, the effect upon his followers can be better imagined than described. Keith is represented as having spoken as a man so eminent should speak—cautiously and without the least exaggeration, fully appreciating the effect his words would have. His faith in Listerism was shaken by losing five cases of ovariectomy out of twenty-seven, in which all of the details of Listerism were carefully carried out. Since he had abandoned Lister's method, he had operated twenty-seven times, with but one death. Just before adopting Listerism in his practice, he had operated twenty-five times without a death, and since the meeting referred to he has added forty or fifty more successful cases without Listerism. With the facts before him, he was obliged to attribute his successes to the careful observance of the minutest details looking to care, cleanliness and perfect drainage. Dr. Sims says if called upon to give up Listerism or drainage he would give up Listerism. Dr. Gross is of the opinion that Listerism may be dispensed with. Dr. Goodell says until Keith reports another series of seventy-odd successful cases, he will not give up Listerism. If the reports are correct, Keith has now operated between 80 and 90 times without Listerism, with but one death; twenty-five times before adopting Listerism with one death; twenty-seven times with no deaths reported to the International Medical Congress, and Dr. Yandell reported to the American Surgical Society that Keith had added forty or fifty more successful cases, making a sum total of 82 or 92 successful cases without Listerism. Lawson Tait's statistics are no less wonderful than those of Keith. Within the past 13 months, he has performed ova-

riotomy 100 times, with but three deaths. No Listerism was used, and not a death from septic poison occurred. The cases were not selected, as six of them were pregnant, and four had acute peritonitis at the time of the operation, and in many there were extensive adhesions. Spencer Wells has performed ovariectomy 70 times since May, 1882, with four deaths. Tait, Billroth and Keith attach far more importance to the trio—care, cleanliness and drainage. Such emphatic views from such eminent men would be altogether conclusive if they were not as emphatically denied by no less eminent men, namely, Thornton, Wells, Lister, and others of equal prominence. While not an advocate of Listerism, I think we must admit that its value in abdominal surgery is still one of the unsettled questions.

A wide distinction is now drawn between Listerism and antiseptic surgery. Many deny the good of Listerism, but few the value of antiseptic abdominal surgery. All good surgery is now looked upon as antiseptic surgery, but all so-called antiseptic surgery—notably Listerism—is by many not looked upon as good surgery. The trio—care, cleanliness and drainage—are, in the opinion of many, the embodiments of antiseptic abdominal surgery.

In reviewing the journalistic literature of the day, we are struck with the number of deaths attributed to the poisonous effects of carbolic acid. Great stress has been laid upon this fact by a number of prominent writers. Even Lister admitted the danger, and claimed before the International Medical Congress to have advised against its use in abdominal surgery. Of five deaths after ovariectomy reported by Keith, two were from acute nephritis, two from carbolic acid poisoning, and one from septic poison. Many agents possessing as good antiseptic properties, and free from the objections which pertain to the free use of carbolic acid have been offered as substitutes.

My object in dwelling upon this point is to enter a plea for a more general use of a *solution of chloral*. After several years of exclusive use of it, I am convinced that it is the best substitute for carbolic acid that has been offered. It provokes and facilitates cicatrization and granulation, opposes the formation and degeneration of pus, and neutralizes or limits the morbid action of all septic fluids. I have seen carbolic acid used in abdominal surgery, and I have seen chloral used in the same class of cases, and have failed to appreciate any advantage claimed for carbolic acid.

Drainage after ovariectomy has never received that attention to which it is fairly entitled. Years ago, when its importance was first urged by a few, it met with considerable favor; but since Listerism has absorbed so much attention, and was supposed by so many to render harmless inflammatory products within the peritoneal cavity, it has fallen very much into disuse. When Listerism was king, drainage occupied the position of a

subject. At present it looks as if free drainage was becoming king, and Listerism the subject.

It has been your Reporter's privilege to witness two cases of ovariectomy in which the value of drainage was forcibly illustrated. The first was a suppurating dermoid cyst of the ovary, which was so firmly and extensively attached to the right iliac fossa that a piece of the cyst several inches square had to be left *in situ*. It presented a honey-combed, suppurating-looking mass, and suggested a hopeless prognosis. In spite, however, of the unfavorable outlook the patient recovered from the operation, and went about the house for six or eight months. The unexpected prolongation of life was unquestionably due to the fact that nature established two outlets for the pus—one through the abdominal incision along the side of the pedicle, and one into the intestinal canal. The amount of pus discharged daily was enormous, and would have been fatal in a few days but for the thorough drainage established by nature. Death at last resulted, not from septic poison but from starvation, as the food passed in an undigested state from the intestinal canal into the suppurating cavity, and out through the abdominal incision.

The second case was a multilocular cyst, with extensive adhesions, and the traumatic injury done in separating them warned the operator to provide for the escape of the inflammatory products. To accomplish this, a drainage tube was passed from the peritoneal cavity out through Douglas' cul-de-sac. For the first twenty-four hours, but little if any discharge occurred, and the patient was doing well. In thirty-six or forty-eight hours, several pints of bloody serum were drained off through the tube—the patient continuing, however, to do well. On the fifth or sixth day, one of the attendants, in removing some pillows from under the patient's legs, pulled the drainage tube out, when, almost like a flash, her temperature and pulse went up. A few hours before this accident, the prognosis was favorable. In a few hours afterwards the patient showed the distended belly, the restless delirium, anxious expression, vomiting, hiccough, high temperature and quick pulse. There is not the slightest doubt in my mind that the life of this patient would have been saved if drainage had not been interfered with.

Drainage is thought by many to be necessary in abdominal surgery only when much visceral or parietal injury has been done. It is urged by others that it is indicated whenever any raw surface is left in the peritoneal cavity. It is claimed that no one can foretell the amount of pus which circumstances unfavorable to repair may make the most trivial wound discharge. The early and frequent removal of all inflammatory products, in anticipation of their decomposition, is, in the opinion of many, the key-note to success in abdominal surgery.

In conclusion, I would urge that in spite of the bright outlook for abdominal surgery we cannot ignore the fact that the course over which the patient has to run after the surgeon has invaded the peritoneal cavity, is beset with many dangers. The conditions which conduce to a favorable or fatal issue are so evenly balanced that the most trivial factor may determine the result. No surgeon can have seen much of abdominal surgery without learning to appreciate the importance of little details. Moments spent in controlling hæmorrhage, in thoroughly cleansing the peritoneal cavity, and in looking to thorough drainage, are golden moments to the patient. The good resulting from such precautions far outweighs the danger incident to prolonging the operation.

This report is a mere skeleton of a large and growing department of surgery—than which there is none more important, and none which offers to surgeons a wider field for usefulness and distinction.

Ex-Presidents' Medical Prize Essay.

The Use and Effects of Alcohol

AS A BEVERAGE AND MEDICINE,

By M. G. ELLZEY, M. D., Washington, D. C.

In response to the invitation of the Ex-Presidents of the Medical Society of Virginia, I venture to present an essay on the use and effects of alcohol as a beverage and medicine.

Alcohol as a beverage.—Is the use of alcohol as a beverage or common drink ever beneficial? or is it always and only a dangerous abuse of a potent and formidable article? That we may have before us the facts in the case, we are now to endeavor to state briefly and simply the known effects of alcohol taken in moderate quantities by a person in health.

First, we observe that such a use of it creates a new physiological want. This want is not a mere taste or relish of the palate, but a systemic demand—often peremptory, irresistible, and what is worse, *hereditary*. In the report of the Eastern Lunatic Asylum of Virginia for 1879, page 10, will be found the following weighty words: "One of the most prolific evils of alcoholism, even when not carried to the extent of drunkenness, is, that it so impresses the organism of some persons as to establish an insane temperament, which is transmitted to their offspring, and which thus establishes an hereditary tendency, which passes down from generation to generation, long after the progenitor who, unconsciously, perhaps, inflicted this calamity upon his posterity, has passed away. That the insane temperament may originate and become hereditary in this way is a doctrine too well established to admit of a doubt." That the alcoholic appetite may originate in moderate indulgence, to become fixed and hereditary, no more

admits of a doubt—so spreading itself over whole generations, a blighting curse, under the black shadow of which once honored families wither and disappear from the earth. Furthermore, epilepsy, hysteria, idiocy, and many other dreadful maladies, result from dram-drinking not carried to the extent of drunkenness, and *become hereditary*.

But if the indulgence be carried to the extent of drunkenness, as in a great majority of cases it will come to be, then we stand face to face with the deadliest evil that curses the modern world. The facts already stated, terrible in their brief simplicity, bring into view a few only of the many frightful consequences of what to some appears a harmless indulgence in a pleasant and wholesome beverage. Look upon a little child, the offspring of your own body, tender and beautiful, and pure as an angel of God; contemplate these dreadful possibilities; and then turn, oh, my brother, and contest, if you can, the proposition here laid down, viz.: The use of alcohol as a beverage is always and only a useless indulgence—a tampering with a danger so formidable as to amount to a tempting of Providence.

It is indefensible for a physician to advise or professionally sanction a habit at once so useless and so fraught with danger. Apart from all moral questions, it is unscientific and derogatory to the God-like dignity of our great profession.

To women, alcoholism is peculiarly dangerous because of their inferior physical and mental organization and development, which nobody doubts whose knowledge, entitles him to hold an opinion upon the subject. And through them all the evils which have been dwelt upon are doubly apt to descend to posterity, while they themselves are apparently guilty of no excess.

Dram-drinkers defend their practice by affirming that they thereby maintain the highest standard of bodily health and vigor, and of capacity for work, manual and mental. No proof of these assumptions have been or at present can be brought forward. We now proceed to examine the facts in the case, and first in order we propose to pass in review

The Physiological action of alcohol.—First, it is to be observed that it is, in greater or less quantities, a poison, fatal to all forms of life. Applied to the roots and stems of plants, it kills them. It is fatal to the micrococci and bacteria, and is an effectual germicide and antiseptic. In animals and in man it produces excitement and intoxication, followed by insensibility, stupor and death. Applied to the root of a nerve, it paralyzes all its branches; and applied directly to the brain itself, it paralyzes also all its functions, or in lesser quantities produces general anæsthesia and insensibility.

By some individuals very large quantities are taken without apparent

effect. Others are profoundly and even dangerously affected by very small quantities. Some, too, are far more susceptible to its chronic toxic effects than others. In some persons a certain degree of tolerance of the intoxicating and narcotic effects is produced by habitual drinking, but in others no such effect is observed.

In these respects something is found to depend on the sort of liquor drank, and the degree of its dilution, its age, and other circumstances. According to the experience and judgment of the writer, *rye* whiskey is, when pure and old, the best and least dangerous of all alcoholic drinks. Common whiskey, vulgarly but significantly called "rot-gut," is bad, often positively dangerous, from its large admixture of fusel oil. French brandy, when pure, is a bad drink, and it is, for the most part, merely diluted alcohol, colored, tinctured, and flavored with divers deleterious drugs.

Some wines produce lithic acid diathesis, dyspepsia, gravel and gout; but light, sweet wines are mildly and moderately stomachic, tonic and nutritious, and scarcely intoxicating unless drank in beastly excess. The same may be said of beer and ale of one sort or another. The malt liquors are, in effect, very dilute solutions of alcohol in aqueous extracts of malt, hops and other things, and are rather nutritive than alcoholic, but fish berries and other narcotics are put into most of them, to their great detriment.

When a moderate quantity of alcohol in any of these forms is taken by a healthy person, a glowing sensation of warmth is immediately felt in the stomach, quickly followed by a sense of exhilaration, and the extension of the glowing warmth to the surface of the body. The pulse increases in frequency and in force; the face flushes; the capillary circulation becomes more active; the temperature of the body is increased, and the mental faculties are quickened. These are the effects of a prompt and powerful stimulant, and such alcohol is universally known to be.

But all stimulation is, in the nature of things, temporary, and passes off, to be followed by a corresponding languor and depression. You cannot push the physiological pendulum off its balance in one direction without its falling back a corresponding distance on the other side of the normal line.

Dr. Hammond, in experiments upon himself, noted the following effects: The food supply was graduated to keep the weight of the body stationary, in addition to which twelve drachms of alcohol were taken daily for five days, and the weight of the body was found to increase in proportion to the diminution of excretion, attended by some disturbance of the general health and mental faculties. Again, twelve drachms of alcohol taken daily for five days more than compensated the loss of weight from insufficient food, without the attendant unpleasant symptoms felt when a like

quantity was taken with undiminished food. Once more the increase of weight was further augmented by an increased amount of food taken with twelve drachms daily of alcohol, and the unpleasant symptoms were also much increased.

From this we may infer that alcohol may temporarily and successfully supplement a deficient food supply without bad consequences; but if the food supply be sufficient for the nutrition of the body, the use of even small quantities of alcohol will be followed by unpleasant effects, which may easily lay the foundations of grave disease.

If alcohol is to be viewed as a food supply when used as a beverage, it will prove a most costly ration, as compared with beef or bacon. It can never be free from danger, and it can never be of any use except in temporary emergencies or wasting disease.

There is some conflict among observers as to the precise effects of alcohol in moderate quantities upon the various nutritive activities of the system. It appears to be established that the retrograde metamorphosis of tissue is always retarded by it. That some of it is always eliminated undecomposed by the lungs, kidneys and skin, is placed beyond dispute. Nevertheless, summing up all the evidence, it appears to be certain that much the greater part of what is taken is oxidized in the system in place of a corresponding amount of the fats and carb-hydrates of the food, or of tissue waste and body fat in the absence of sufficient food—the unconsumed fats being stored as body fat. Its conservative effects also seem to extend to the proteids of the food supply and of the living tissue, which are screened from that emaciation to which they are subjected when the materials of combustion in the food supply are not ample for keeping up the heat and various forces of the body to their normal standard. It appears, therefore, that through the conservative effects described, body fat may accumulate, and the nutrition of the proteid elements of all the living tissues be at the same time promoted.

It is easy to comprehend, in view of these facts, the prompt and considerable increase of weight which often follows the use of alcohol in certain wasting diseases. Liebig and others held that alcohol may be converted into fat. This remains in doubt, though the general opinion is adverse to the view.

Experiments in feeding live stock show that the ordinary carb-hydrates of feeding stuffs are sometimes converted into fat. At least, the accumulation of body fat is greater than the fat of the food supply and the fat which would result from the splitting up of the proteids of the food into fat and urea, taken together; but it is not certain that the proteids of living tissue may not undergo a retrograde metamorphosis resulting in urea to be eliminated, and fat to be stored as body fat. The writer believes that there is

actual evidence of such a change from lean to fat in fattening animals. He does not believe that alcohol is ever stored as fat; but distinct disproof of such a thing being possible cannot, at present, be brought forward.

The combustion of alcohol gives rise to much less heat than the combustion of a corresponding amount of fat and tissue waste; and so, by substitution of itself to be burned in their place, reduces the temperature of the body, as during the excessive combustion of high fevers is clinically observed to be the case.

We are now prepared to return to the question of alcoholic beverages increasing the power to sustain fatigue and exposure, or, in other words, permanently conferring an artificial working power above the normal standard of the individual. The writer has enjoyed practical experiences of some value upon this point. In early life his father employed a large force of hands, and, during harvest and other seasons of especially severe labor, always gave them a whiskey ration. So long as this was done he often had hands to "give out" from exhaustion, and be obliged to leave or be carried from the field. Afterwards the practice was changed; the whiskey ration was not given, but iced water was freely allowed. A barrel was filled with blocks of ice, and then taken to the spring and filled up with water and hauled around the field after the hands, who drank *ad libitum*. During fifteen years that this practice was continued, there was never a single case of exhaustion among the large force of hands employed, and it is perfectly certain that the improvement was due to the abandonment of the whiskey ration. In gathering ice the abandonment of the whiskey ration was, under the supervision of the writer, obviously followed by decided improvement of working capacity in the gang of hands employed. The writer also carefully attended to this point during four years' experience as a military surgeon, noting results—always confirmatory of his earlier experiences in the management of agricultural laborers. Neither, on the other hand, have there been, nor can there be, any proofs advanced that alcoholic beverages do confer power to resist exposure, or to endure labor and fatigue. Every physician well knows that the worst patient he can have is an habitual dram-drinker. The point is, therefore, confidently maintained that under circumstances of unusual exposure and fatigue alcohol does harm and not good.

There is a common belief that alcohol confers a special power to resist cold. Nevertheless, it is perfectly certain that the reverse is true. All Arctic explorers, Napoleon's army in Russia, the St. Bernard monks agree, as the results of their experience, that it increases the danger of death by freezing. It is proverbially true that drunkards are more apt to be frozen to death than sober men under the same exposure to cold. It may

be simply stated, without further discussion, that alcohol diminishes the power of resisting cold.

The Use and Effects of Alcohol as Medicine.—Of the extreme value of this drug as a medicine in many conditions of disease, every competent physician is well aware. For the purposes of this essay, however, this branch of the subject must be rigidly condensed.

If the views of its physiological action already advanced be fairly correct, we can have no difficulty in seeing that it must be an indispensable agent in the treatment of many of the most dangerous maladies. Those of us familiar with military surgery in the field know how indispensable it is for the relief of the deadly shock of dangerous and severe gunshot wounds. Often and often in these cases have we seen it stave off the mortal collapse, soothing, at the same time by its anæsthetic effects, the frightful agony of the lacerated sufferer until all the reserve forces of nature could be brought up to the support of the patient in his long grapple with the great destroyer. A vast experience with wounded men on the field of battle enables the writer to say that it would be difficult to overstate the value of alcohol in such cases, and in the midst of such surroundings. It far surpasses in value all other things combined. There are thousands of useful men alive to-day, who, but for this great remedy, must needs have been dead; and there are thousands "dead on the field of glory," who would have been with us to-day in the land of the living, if they could have been timely supplied with a draught of this potent stimulant. In all cases of formidable surgical shock, whenever and wherever met with, what surgeon believes that he can safely dispense with alcohol?

Many severe and malignant diseases present us with conditions essentially like surgical shock. Obstetricians will shudder as they vividly recall some of the appalling cases which must have passed through their hands. In the bites of formidably venomous snakes and other poisonous creatures, we have often a state of rapid and extreme shock, the power of alcohol to hold which at bay, while the storm goes by, has conferred upon it much of its well-merited reputation as an antidote to these poisons. In malignant diphtheria we have often a very similar condition, as well as in scarlatina, anthrax and other blood poisons. In all such cases, the determined, persistent use of alcohol in such quantities as may be necessary—both by the mouth and hypodermically—should be persisted in to the very last. So, perchance, we may once in a while snatch a person, dying to every intent and purpose, from between the very jaws of death. In some of these cases also the germicidal and antiseptic powers of the remedy are of undoubted value.

Alcohol renders the blood an unsuitable medium for the generation and development of micrococci and bacteria, and so rid the great vital centres of the danger of overwhelming inundation by these invisibles multitudes.

In typhoid fever, tissue waste proceeds at a rate greatly enhanced, while the powers of digestion are almost entirely suspended; hence the high temperature and rapid emaciation which are always to be observed in well-marked cases of that disease, with a consequent and corresponding prostration of strength and of all the vital energies.

Alcohol, which so well supplies the place of a portion of the lacking food, and substitutes its own combustion for that of tissue waste, thereby retarding retrograde metamorphosis, promptly enters the circulation without digestion, reducing the fever and heat, supporting the strength, and staying the progress of emaciation. No marvel, then, that clinical experience has fully confirmed the great reputation which it has long enjoyed as a remedy in this disease.

In consumption, the experience of physicians accords with the common belief in the great value of alcohol. In the judgment of many able and judicious practitioners, it stands at the head of the list. In the experience of the writer, he has found whiskey of more value, and cod liver oil and phosphates of less value, than from the statements of authors he was led to anticipate. Neither is he unable to give a reason for the faith that is in him that, as a remedy for phthisis, whiskey (good old rye whiskey, he means) stands at the head of the list, deserving to take precedence of all remedies.

But, first, let it be remarked that all physicians know that a great majority of all well-developed cases of phthisis will prove fatal, no matter what may be done. Tuberculosis is a lesion of nutrition. It may be regarded as a self-evident truth, that while the nutritive functions are all normally active, tubercle will not be deposited. But when the predisposition exists—whenever mal-nutrition occurs either from insufficient or unsuitable food, or from partial failure of the digestive functions—interstitial nutrition or assimilation is disordered, vital energy is impaired in all tissues throughout the organism, then tubercle finds all the conditions favorable to its ravages, and rapid and extensive deposits may be looked for. In this view of the case, the line of defence becomes clear, and the probably inestimable value of alcohol thrusts itself upon the attention from this *a priori* standpoint.

The beginning of the fatal circuit of which tubercle is the close is indigestion. In the progress of the malady, as long as the stomach holds out, the physician is hopeful. When that great organ refuses its office, he knows that hope is gone. As in typhoid fever, the great need is for food which shall impose the smallest possible tax upon digestion.

It has already been shown that alcohol—so effectual a substitute for a portion of the food—enters the circulation without digestion. Let us emphasize this great point in favor of our great remedy. Of what else can it

be said that it is a successful substitute for an important portion of the food which promptly and easily enters the circulation *without digestion*? Carbohydrates must be pulled in pieces by diastase and converted into glucose, to pass the organic membranes, and be then reconverted into glycogen before they are ready for combustion. Fat must be emulsified and saponified and again dehydrated. Proteids must be converted into peptones by pepsin and trypsin, and these undergo further transformations before they minister to the wants of the living organism, and all these preliminary processes consume a portion of the already insufficient supply of vital energy.

But alcohol takes a direct road to the circulation, taxing none of the vital organs, but rather giving a filip to their energies, *en passant*; and once in the circulation, enters forthwith upon its usefulness, suffering oxidation and liberating heat and other forms of energy *pro re nata*. Such are the reasons for the faith that is in the writer, that alcohol as a remedy for consumption deserves to take precedence of all others. To get the best effects of it, it must, of course, like every other great remedy, be skilfully and judiciously prescribed and used.

We advance one point, in conclusion, for this essay must be brought to a close. The anæsthetic effect of alcohol, especially marked, the writer has reason to think, in whiskey, is a therapeutic agency capable of being of great value, judiciously used, in hysteria and allied complaints. Especially in tetanus may we obtain great advantage from it. In hysterical spasms, and in some forms of dysmenorrhœa, whiskey is of great value.

In view of the imminent risk of establishing the alcoholic appetite, with hereditary consequences so deplorable, of which all experienced practitioners must have met with melancholy examples, it should never be prescribed in the chronic diseases of women, unless upon a calm and thoughtful review of the whole case in all its bearings, it appears to be indispensable. Never, indeed, under any circumstances, is the risk of establishing the taste to be ignored or left out of view in prescribing alcoholic medicines.

In conclusion, the writer would say that he fully recognizes drunkenness as the hugest evil which blights our sin-cursed world; but he conceives that it would be foreign to the purposes of this essay to discuss this topic. It would be easy to convert this paper into a sort of prohibition stump oration; but the author does not understand the purpose of the Ex-Presidents to have been to bring out literature of that sort. Neither has it appeared worth while to treat the subject exhaustively from the standpoint of the therapist. Everything worth saying upon the subject from that standpoint will be found accurately and well stated in the works of our standard authors. It has been sought to give the subject general treatment from a

physiological standpoint, seeking especially to give prominence to the absence of any real benefits from the use of alcohol as a common drink ; to the omnipresence of the menacing dangers of the alcoholic appetite and its hereditary consequences, and to the heavy responsibilities resting upon the medical profession in prescribing it upon hasty and ill advised conclusions. As a medicinal agent in wasting disease, it has been sought to show that its value depends upon its power to enter the circulation without digestion, and perform at once the double office of stimulant and food.

It seems to be clearly established that it prevents tissue oxidation and oxidation of body fat and food fat simply by substituting itself to be burned in their place, leaving the body fat *in statu quo*, and leaving a certain unconsumed overplus to be added to the body fat from the food supply. Whereas, its combustion giving rise to less heat than that of the tissue-waste and food elements in place of which it is oxidized, the temperature of the body is reduced. These facts constitute alcohol the greatest of physiological luxuries—a “*magnum bonum Dei*” in its skilful, scientific and legitimate use ; but in its *abuse*, a destructive and terrible agent—satanic in its far-reaching, all-pervading power for mischief.

Physicians, as members of a great profession, and as members of society, ought not to forget that, on account of the weight which attaches to medical advice and medical opinion, our responsibility concerning the *abuse* of alcohol in health and disease is very great.

SUBJECT FOR GENERAL DISCUSSION.

ABNORMAL MENSTRUATION.

The subject was opened by the reading of the following paper by Dr. J. EDGAR CHANCELLOR, of the University of Virginia:

I deem it germane to the subject under discussion first to ask, *What is normal menstruation?* As a simple definition which will be accepted by all, we state "*The periodical discharge of blood from the uterus, which occurs in the healthy woman every lunar month, except during pregnancy and lactation, when it is, as a rule, suspended.*"

I do not propose, nor would time allow me, even briefly to discuss all the abnormalities of menstruation. I pass directly to those abnormal conditions which I regard as the most important of all the departures from healthy menstruation, namely:

Menorrhagia and metrorrhagia.—The *first* of these terms applies to that condition in which the menstrual flow is excessive at the period. The *second* applies to any flow of blood that appears during the intervals, whether it is profuse or not, as Dr. T. G. Thomas has defined it. Dr. Samuel Ashwell, of London, defines *menorrhagia* as *inordinate menstruation*—both as to frequency of return and the amount of the secretion, in the majority of cases attended by direct loss from the uterine arteries. He makes two forms of the disease, which are again sub-divided, as to causes and the condition of the patient. In that form, attended by direct loss of blood from the uterine arteries, he includes the *acute or active* menorrhagia, passive or chronic and congestive menorrhagia. We may readily trace in the last two forms that of *metrorrhagia* of other writers, as we find the class of symptoms occurring in the same class of patients. His differentiation is sharp and clear, which, with Dr. T. G. Thomas, "all must admit that it is the most important, as it is the most difficult of the physician's duties in reference to the symptoms and disease" we are considering, and demands

prompt and decisive action. There must be no temporizing, no indecision, no delay in analyzing the symptoms and applying the remedies when we are consulted. The uterus and its appendages and surrounding tissues must be carefully and systematically examined. * *

We are here, Mr. President, more to give our experience and observation in what has come up in our every-day life as busy practitioners, and to profit by the experience of our brethren in the profession, than to criticize the views and theory of others, or to elaborate our own. Indeed, the able works and writings of that pioneer in gynecology, J. Marion Sims, and his inventive genius, with those of his co-laborers, Emmet, Thomas, Peasley, Goodell and Battey, have, by clear differentiation and proper classification of the diseases of females, with the improved appliances for diagnosis and treatment, so simplified our work that the "wayfaring practitioner, though a fool, need not err therein."

In my limited observation, I have found both menorrhagia and metrorrhagia of frequent occurrence—possibly more so than any one of the abnormal conditions of the uterus. This might be expected, since they are symptomatic of a very large number of the functional and organic affections of this organ, and common both to the single and married state.

This brings us to consider the causes of this pathological condition. Time will only admit of my noticing some of the more prominent. Among these I mention *general plethora* and its opposite state, climate and habits of life, chronic metritis, or *areolar hyperplasia* of Thomas, granular degeneration, fibrous tumors, cancer or sarcoma, polypi, fungus degeneration of uterine mucous membrane, retained products of conception, subinvolution, and displacements of the uterus. In fine, any condition inducing active or passive congestion of the lining membrane of the uterus, or any solution of continuity of its mucous surface, etc.

I can only notice some of the more prominent of these causes, and which, possibly, are more frequently overlooked because of their obscurity, viz.: *Displacements* and *subinvolution*. I have been struck with the fact, especially referred to by the older authors, that no attempt is made to apply the abnormalities of menstruation to any definite form of displacement of the womb. We notice in the first volume of Sir J. Simpson's "Obstetrical Works," he states that he has found the catamenial discharge to be more oppositely affected—occasionally in the way of menorrhagia, sometimes dysmenorrhœa. Dr. Churchill says it may be profuse, or painful, or both. This apparent contradiction in the description of symptoms must be due to the lack of careful discrimination of the two classes of cases, which are dependent on different conditions of the same organ. We cannot rely on any one symptom of retroflexion, anteflexion or versions.

My observations incline me to believe where *retroflexion* gives rise to a

diminished menstrual flow, we have the attending chronic inflammation with hypertrophy; and when retroflexion is attended by menorrhagia or increased flow, we have *subinvolution* of the organ. Dr. Atthill, of London, in a paper on this subject, states emphatically that when retroflexion is due to chronic inflammation or congestion of the uterus, terminating in hypertrophy, the catamenia are diminished in quantity, and frequently painful. But when retroflexion is the result of subinvolution of the uterus, following labor or abortion, the catamenial discharge is increased to an alarming degree.

Subinvolution.—When we consider that the retrograde change in the puerperal uterus requires six to eight weeks to complete it, it is not surprising that the arrest of this change (or *complete involution*) is of such frequent occurrence, and is one of the most fruitful causes of the abnormalities we are considering, as well as a chief source of most of the chronic uterine troubles. I regard a watchful care of our lying-in patients for the first four or six weeks after confinement one of the most important duties of the medical attendant.

Treatment.—Attention should be given to the general condition of the patient, and a judicious selection of tonics made—some acceptable preparation of iron, iron and quinia, ferric alum, or some one of our American natural mineral waters of iron and alum, or the mass from same, which I have found peculiarly beneficial in passive uterine hæmorrhage—especially that of Rockbridge Alum Springs, Va.

The general indications of treatment are familiar to every practitioner. Absolute quiet of mind and body, cool apartments, a hard bed, iced-cold, acidulated drinks, cloths wrung out of cold water applied over the vulva, uterus and thighs, elevating the foot of the bed, a judicious selection and use of hæmostatics, such as ergot, gallic acid and cannabis Indica, as advised by Dr. T. G. Thomas as one of the best. More serious cases demand a more careful examination with speculum, of which none meet the indication better than the duck-bill speculum of J. M. Sims, or that of Dr. W. T. Howard, of Baltimore. The use of the tampon or a bag of pulverized alum, from ʒij to ʒss, or tannic acid applied to the os uteri; dilating the os with sponge tents, applications of hot water by a sponge as hot as can be borne; and after sufficient dilatation of the os, cautious application of tincture iodine, official, as also Churchill's preparation—persulphate of iron, diluted with two parts of water to one of persulphate of iron. The curette may sometimes be demanded, and renders most valuable services when other remedies have failed. I close these desultory remarks by citing a case, in which the use of the curette saved the life of the wife of a member of this Society.

In 1879, I was called to see this estimable lady, whose condition was so alarming that her husband (himself a most excellent practitioner) had de-

spaired of her recovery, so free, exhausting and obstinate had become the metrorrhagia. On first seeing this lady, I found that all the usual remedies had been tried with little effect. The patient was pale and exhausted, and had been bleeding quite freely. I proceeded at once to make a digital examination. I found the vagina, as well as the cul-de-sac, filled with coagula; the perineum was slightly lacerated, which, with the relaxed condition of the vaginal walls and uterine engorgement, gave rise to prolapsus uteri. There was also laceration of the posterior lips of the os, extending to the cervix. Both the os and cervix were patulous—readily admitting the index finger beyond the second joint. On withdrawing the hand, the patient was placed in the proper position for the use of Sims' speculum (in the use of which her husband was skilled). The examination was most satisfactory. The silver, blunt probe was used in the exploration; also Simpson's sound—both of which passed readily and freely to the fundus, revealing not only great increase in the size of the uterus, but that peculiar mock-orange feel of the lining membrane, indicating corporeal metritis, or fungoid granulations. From the increased flow of red blood on the touch of the sound to the posterior and upper left side of fundus, I at once diagnosed mucus polypi, and applied the curette to the spot indicated, and removed a tablespoonful of the growth, which was not, however, put under microscopic examination, and I do not assert positively its character. The bleeding was promptly relieved, and never returned. The recovery was not only prompt, but complete, as the birth of a child some twelve months afterwards fully established.

SOME CASES OF HYSTERO-EPILEPSY OR HYSTERO-CATALEPSY.

Reported by Dr. S. K. JACKSON, Norfolk, Va.

Having had the rare opportunity of observing some five or six cases of these singular affections during the last few years, I have thought it might not be uninteresting, and possibly instructive, to describe the most interesting of them, on account of the very great variety of phases which they present. Unfortunately, as will be perceived, the cause of the trouble was not always clearly apparent; but it may be stated that generally the at-

tacks accompanied abnormal menstruation, and to report them at this time is *apropos* to the subject fixed for discussion at this meeting.

The *first case* was that of Sarah S., a pretty girl of 19, in the lower walks of life, to whom I had been called by a benevolent lady, in the absence of the physician who had been attending her for several months. I found her lying upon her back, her head slightly elevated, with her pretty, black eyes fixed, apparently, on some one spot on the ceiling, not moving a muscle of her whole body. There was complete paraplegia, and, if my memory serves me, anæsthesia of the lower limbs, with rigidity. The rigidity of her upper limbs was not so marked; their position could be changed by the partial ability to bend each of their joints. When she attempted to move her arms, they would take on a violent and rapid vibratory movement, generally horizontal, or what would be horizontal if her body had been erect, for they were at right angles or transverse to the line of the body. If she attempted to take hold of a glass of water, she would invariably throw out the water. She would make her wants known to her mother by a grunt, which was the only audible sound she could make. She could not flex her fingers, but if a slate pencil were placed between them extended, as they always were, she could write quite legibly on a slate. When writing in this way, her eyes were always fixed on the same spot on the ceiling, and not on the slate. She had been in this condition for about five months, and it was stated that nothing done for her had had the slightest effect upon the disease.

The history of the case, as given by her mother, was, that some four or five years before, when she was about 14 or 15 years old, she was in the habit of jumping off a high porch without balusters in their back yard—that on one Saturday she and a companion spent the whole day at this amusement—running up the steps of this porch and jumping off on to the pavement below. On the afternoon of that day she was suddenly taken with a violent fit or convulsion, which lasted some hours. During this, a physician was called to see her, but it could not be seen that the treatment had had any effect on the violence or duration of the fit. These fits recurred frequently, but whether or not with any periodicity, her mother could not recollect. She did, however, remember that they frequently did occur at the time of menstruation, which was always more or less disturbed. This state of things, after lasting four or five years, culminated in the cataleptic state in which she had been for four or five months previous to my seeing her.

The history of the case suggested to me at once the probability of uterine displacement, and after a delay of some days, to wait for the close of a catamenial period, I proposed and made a digital examination. The patient did not seem to be aware of what I was doing, or there seemed to be

such a blunting of the sensibilities that she did not care or notice it at all. I found the clearest case of retroflexion of the uterus I have ever met with. The os and cervix were very nearly in their normal positions, but the fundus was below and posterior to them, and well down in the hollow of the sacrum. Not being prepared to readjust the organ, I merely effected a slight elevation of the fundus, and left her for a few days to make the necessary preparations, and for her mother to secure an efficient female assistant. When the appointed day arrived, great was my surprise to find that the slight relief of pressure on the sacral nerves, which had been effected on my previous visit, had produced a great change in her condition. She had become irritable, restless, tossing in bed; there were even some jerking and kicking of the previously paralyzed limbs. She had become by this time determinedly opposed to further examination, and what was done had to be done by force.

The great struggling prevented my ascertaining how far I had effected my object, and as any further manipulation was entirely impossible unless she could be gotten under the influence of an anæsthetic (to do which an ineffectual effort was made), I was obliged to await the result of the first and only attempt at adjusting or unfixing the uterus. On my next visit I found her sitting on the side of her bed, with her feet on the floor, and was told that she could walk across the room with her mother's assistance. She slowly recovered until she was able to walk on the street.

The cause of the disturbance was much clearer in this than in some of the following cases, which I will proceed to relate:

The *second case* was that of Miss A. F., a young woman 22 years of age, who was engaged as a manufacturer of shirts for one of our stores. She was stout, active and strong, and did most of her work on a very heavy-running sewing machine, which I several times had advised her to give up. I had on several occasions been called to attend her for menstrual irregularities, which generally yielded readily to treatment. On one occasion, about the time when the catamenia should have appeared, she suddenly went off into a cataleptic condition, in which she remained for four weeks, or until the reappearance of menstruation at its next period. After that, she was quite well for four weeks, or until the next menstrual period, when, from its failure a second time to appear, she went off again in the same condition, and remained so another four weeks. After that the menstrual flow became regular, and she has been well ever since. She has now changed her occupation, having become a saleswoman in one of our stores.

The peculiarities of this case were, that when not disturbed she remained perfectly motionless, as if asleep or in a trance. Her eyes were closed; and in the first attack she did not utter a word. In the second, at one time she became very loquacious. She seemed to imagine she was with a

friend, generally, on ship-board; would talk to him in the most affectionate manner, beg him to do this or that, and would sometimes reproach him either for having done or for not doing what she had begged him to do.

But the most interesting phase of this case was the complete hemi-anæsthesia of the right side, with the most exalted sensibility of the left side. I believe a nail might have been driven into her right side without her feeling it; but you could not touch her on the left of the median line with even a feather without her almost jumping out of bed. This curious condition existed in both attacks, and this is the only case in which I have observed it.

Third Case.—In April, 1879, an anxious mother brought to my office her only daughter, who was suffering in such a way as to cause her considerable uneasiness. She was a bright, intelligent girl of about 18 years; and though of an unusually amiable disposition, she had become irritable and restless, easily excited, and slept but little. Her nervous system was strained to its utmost tension, and there were reasonable fears lest her mental faculties might be impaired. There was deficient menstruation, and considerable irregularity in its appearance. As all this disturbance was the effect of her great anxiety to take a high stand at her graduation, which was then approaching, I advised an immediate discontinuance of her school studies. To this she would not listen, and would not consent to give up the race she had been straining every nerve to win, when so near the goal. She expressed her determination to be graduated, and after the succeeding vacation, herself to assume the responsibilities of a school teacher. My most earnest entreaties and protestations were of no avail to prevent the carrying out of this plan; and in the following fall she entered upon these new duties. She boarded in a family which had, as an inmate, a young lady who was idiotic or lunatic, who at once conceived the most ardent attachment for the young teacher. Her fondlings, so far from being well-received or reciprocated, produced in the subject of our paper the utmost fear and dread. The unfortunate girl followed her wherever she went, and there was no possibility of getting out of her way. If she locked herself in the parlor, either for a moment of quiet reflection or for playing on the piano, she would see the poor idiot peering at her through the slats of the window blinds.

This state of things could not last long without serious effect upon a nervous system, already strained almost to the breaking point. Hystero-epileptic attacks soon supervened, which obliged her to be brought home, where she again came under my care. She had violent clonic spasms, which lasted variously from half an hour to two or three hours. They would commence with a tremulous agitation of the limbs, which would increase to violent jerking. Accompanying these, there was the most distressing

apprehension of seeing the dreaded idiot. Almost every object in the room would appear to be that face peering at her. A small space of broken plastering over her bed would seem to furnish her with the most frequent sight of it. She would beg the bystanders to protect her from the hideous object, and to keep her off, though she seemed to think that one person had greater power over it than any one else. The attacks would sometimes go off suddenly; in other attacks, she would remain in a cataleptic condition for a longer or shorter period. A curious, hoarse cough, like the barking of a large dog, almost always accompanied them. They gradually became less severe, and often occurred at longer intervals, until they subsided entirely. The last one in which I saw her occurred while sitting in her chair, and it was more of a cataleptic character.

Fourth Case.—In May, 1877, I was called to see a young lady, 15 years of age, who was suffering with pains and nervous twitchings in both arms. What she complained of was that “her arms felt like they were going to be unhooked.” Her mother attributed the trouble to her intense application to study, as she was approaching an examination; but her school history absolutely excluded any such theory. Her teachers said they had noticed for some time great intellectual dullness, and that they found it almost impossible to ascertain whether she ever caught any idea they endeavored to impart to her. After suffering for some days in the manner above described, she fell into what seemed a profound sleep, in which she remained for four weeks. During this period she never opened her eyes, never expressed a want, never uttered a sound¹, and was never known to move a muscle of her body, except, perhaps, in the act of deglutition, for when food was placed in her mouth, and her mother would attempt to rouse her by shaking or slapping her face, she would sometimes swallow.

At the end of this four weeks an imperfect catamenial flow commenced, during which she opened her eyes, but she remained in a cataleptic condition for the following four weeks, with her eyes wide open. She was never seen to wink, nor was it ever known that her eyes were ever closed—night or day. After the next menstrual period, there was occasional closing of the eyes as in sleep; but when her eyes were open she was as dead to all surroundings as if in the profoundest sleep. Nothing could attract her attention; nothing interested her. She could not even be startled by sudden noises. Her mother attributed her condition to the presence of some shot in the bend of her arm from an accidental discharge of a gun some eighteen months previous, and before she had removed to Norfolk, and she begged me to extract them. Though, of course, I knew that they had nothing to do with her singular state, I was very willing to take out the shot, hoping that the pain of cutting for them would rouse her. I took out five—all I could find on the first trial—but she took no more notice of

what I was doing than if she had been dead. Not the slightest resistance was made. I did not even need any one to steady her arm, which hung down by her side on the bed, like the arm of a cadaver, and with as little motion or sensation in it. After a few days, however, when the incisions were healed, I discovered a couple of shot much deeper than the rest, and when these were extracted she showed that she felt the wound, and jerked her arm away. This was one of only two signs of consciousness she exhibited through the whole period of her attack, which lasted fully five months. The other one was on one occasion when I was administering an interrupted electro-magnetic current, which I did by putting myself in the current and using one of my hands as an electrode. I discovered an expression of discomfort whenever I touched her face, and there seemed to be a dread lest I should renew the application. Being anxious to make the best use of this, I asked her to look at me; she took no notice whatever of the request. I repeated it, and with the threat that if she did not turn her eyes towards me I would touch her face with my electrified hand, she showed no sign of ever hearing what I said. "Very well, then," I said, "I will put my hand right on your face, but if you turn your eyes I will not do it." She remained perfectly unimpressed, apparently; but as I brought my hand slowly towards her face, reminding her that it was approaching, nearer and nearer, and was now almost there, she suddenly turned her eyes, and they remained fixed in their new position.

This was a well-marked case of catalepsy. While some of her joints were easily flexed, others were entirely rigid. Her arms could be raised by bending the shoulder-joints, and when left in this elevated position, they would remain so for an indefinite period. Her mother so much disliked to see them in such an unnatural posture, would invariably place them down upon the bed. Upon one occasion I made a trial with her lower limbs sufficient to convince me that they might be treated in like manner.

For five months this case was on hand, causing the greatest anxiety to her mother and her friends, and although most of the time we were obliged to administer nourishment by enemata, she did not show any signs of emaciation until towards the end of the fourth month. Up to that time she had looked florid and plump as in health.

Since her recovery, it is apparent to all her friends, and especially to her teachers, that there has been great improvement upon her condition anterior to the attack. Her intellectual dullness, sombre manner and morose disposition have given place to a pleasant, affable deportment, approaching, at times, to vivacity. She often recalls the occurrences of her attack, and seems to remember everything that took place. When asked why she did not reply to our questions or do what we wished of her, her only answer is, she couldn't, or that she "did not want to." There evidently was a total loss of will-power, and a complete anæsthesia of the whole body.

The cause of the trouble in this case was very obscure. The deficient menstruation was the only abnormal condition connected with it—the only function that was disturbed. A vaginal examination failed to discover any derangement of the uterus as to position or size; but there was a bend of the sacrum about midway of its length, nearly at right angles, evidently occasioned by a fall in early life, which would render the sacral nerves particularly liable to be pressed upon by an engorged or heavy uterus. That this was the case during the ineffectual menstrual period is more than probable; but at no time when an examination was made was this found to be the case.

Fifth Case.—The next and last case I shall notice in this paper is still under treatment. It presents such a remarkable set of phenomena I would be reluctant to report it (especially as I have not had opportunity of observing them all myself), but for its similarity to a case republished in *Braithwaite's Retrospect*, No. 79, from the *British Med. Journal* of Feb., 1879, in which some of the prominent features in this case were also the peculiarities of that; and from the perfect reliability of the testimony of her family, the head of which is in the United States Navy, and holds a responsible position near us. I have in my possession a voluminous history of her case, written by her father, containing a diary, for a considerable portion of the time, of her sayings and doings. From this and from my own observations, I condense a narrative of the case.

Miss B., a sprightly girl, just 15 this month, was taken one evening about the last of last April with what appeared to be a chill. The usual remedies were administered for a malarial attack, and the chills subsided until the 4th of May, when she retired early under an apprehension of a return of them. She soon commenced jerking and jumping, and her father, supposing she had a fit, sent off for the nearest physician, who pronounced it hysteria—a thing much dreaded in the family. These attacks at first lasted from ten to twenty minutes; but they became longer and longer, lasting from two to four hours. They were so violent as to require two to four men to hold her to prevent her injuring herself. She would sometimes try to bring her feet and head together in front of her; then suddenly reverse the curve, and try to bring the back of the head and heels together. She would sometimes so far succeed as to throw her head back between her shoulders, with her face flat on the bed, and throw her feet back above her head. From this position it was impossible to straighten her, and the attendants had only to wait for the next contortion, which was as violent in some other direction. Her grip was said to be astonishing, and made the stoutest man wince with pain. These attacks occurred, with greater or less intensity, until the last of June, when there was an entire change in her condition. She would go off suddenly into an uncon-

scious state, when all at once she would commence laughing and talking to some imaginary person, making the most ridiculous remarks. Sometimes she would abuse them for not being fit companions for her, etc. At times, nothing could rouse her—not even the loudest noises, as thunder or the firing of canon. At other times, she could hear the faintest whisper.

About the 5th of June, she having taken a great dislike to her physician and the medicine he gave her, the family determined to place her under the care of another. I then saw her for the first time. There had been complete amenorrhœa for at least two months; and it was very evident that she was suffering from the absence of the flow. The means directed to the relief of that end had the happiest effect upon her, and caused at once a mitigation of the violent paroxysms she had been having. An entire change in her condition took place, until, by the 20th of August, nothing unpleasant or alarming occurred in her case.

Since that time there have been strange periods of double consciousness. She would go off suddenly into a cataleptic condition, and remain motionless, with her eyes always closed, for a period varying from half an hour to two or three hours. In this state she would talk as though in the company of distant friends in Baltimore or Washington. She would tell where they were, and what they were doing; and strange to say that letters received by the family have verified her accounts. On one occasion she burst into a laugh at a new wrapper her Baltimore aunt had on that evening at a certain lady's house in that city. A letter received from this aunt informs them that on that very evening she did make a visit to the lady's house referred to, and appeared in such a dress as this patient described. On one afternoon a friend of her brother called to induce him to make a visit some miles in the country with him. To this he objected, because he had no horse to ride home on. Upon his friend's promise to bring him home in his vehicle (to which a *sorrel* horse was attached) he consented; and they both started off on the visit. About half-past eight o'clock, much earlier than they were expected to return, she, being in one of her spells, remarked that her brother had started home. All the family thought it much too soon, but she reiterated her vision, and insisted upon it. After a while she said, "He is now by the big tree, and riding a white horse." This could not be, they all said, for his friend had promised to bring him with his *sorrel* horse, and there was no other he could come on. A little later she said, "There, Billy is crossing the water, and on a white horse." As by this time he had gotten near enough to be seen, some of the family went out, and sure enough, saw the brother approaching the house on a white horse none of the family had ever seen before.

When in these states her eyes are always closed, and it is impossible to force them open with the thumb and finger.

A few days ago her mother brought her to me. While I was talking about something that interested, and, maybe, somewhat excited her, she suddenly closed her eyes, dropped back her head, and went off into one of her spells. We continued talking, apparently not regarding her. She soon began to talk. She told me she had written me a letter. I said I was glad to get it, and hoped she would write me another. This she promised to do. After getting out of this state I repeated the request, and reminded her of her promise. She quickly replied that she had never written me yet, but would do it.

There seems to be such hyperæsthesia of the optic nerve that she seems to be able to see through the closed eyelid. With her eyes closed in this way she runs rapidly through the house, avoiding the different articles of furniture, even in a darkened room.

When in my house, her father presented to her a book, which she read with the greatest ease. I handed her a letter, which she read without much difficulty. I asked her to play upon the piano. She ran to the instrument, got round the stool, seated herself, and found the pedals at once. She played several airs with considerable taste, and unexceptionably. After coming out of the spell, I requested her to play again, and the same pieces. This time she had to look for the pedal, and played with much more hesitation than before, and with not near so much taste.

Her spells now afford more amusement than concern, and there is great probability of a speedy cessation of them, as the catamenial periods have become normal.

DISCUSSION.

Dr. M. G. Ellzey made a brief verbal report of a case of epileptiform convulsions in a female patient, for the relief of which "Battey's operation" was performed with perfect success. It was a case of "abnormal menstruation." Silk ligatures were used, and the pedicle was returned into the abdomen, and the wound of the abdomen was securely closed by silver wire sutures.

In reply to a question by Dr. Hugh T. Nelson, Dr. Jackson stated that in the *third* case reported by him, alimentation was secured by enemata of nutritious injections.

Dr. Wm. L. Robinson remarked upon the value of galvanism, rightly applied, in many cases of abnormal menstruation.

A desultory conversational discussion relating to matters of minor importance followed.

VOLUNTEER PAPER.

REMARKS ON THE PATHOLOGY AND TREATMENT OF THE

Pneumonia of Early Infancy.

By BEDFORD BROWN, M. D., Alexandria, Va.

I desire to submit for your consideration to-day some remarks on the pathology and treatment of pneumonia as it occurs in the first six months of infancy. All medical men are fully aware of the great mortality attending this affection in early life, and thoroughly appreciate the difficulties in the way of its successful treatment. Statisticians inform us that one-third of all infants born alive perish before they reach the fifth year of age. This is an enormous rate of mortality, and pneumonia is certainly responsible for a very considerable proportion of it. Indeed, in point of mortality it will rank with most of the grave diseases of infancy, and in an equal degree deserves our serious consideration.

There is an impression abroad that medical men do not comprehend clearly and scientifically the diseases of infancy and their treatment, but depend very much upon mere personal observation and experience, and trust to good fortune for results. It may be that we do not attach due importance to these apparently trivial matters, not reflecting on the vast influence which these questions must exert on the future progress of our race. It is from this embryo material which we visit and prescribe for in our daily rounds of professional duty that springs the splendid man, with all

his varied attributes of intellect, whether it takes the direction of oratory, science, poetry, art or military heroism, and lovely woman, but little less beautiful in character and person than the angels, with all of her purer and better instincts exerting that refining and elevating influence on our moral natures which no other earthly power but woman can.

One of the missions of our profession, and a duty imperative on us, is to do all in our power to lessen this fearful rate of infantile mortality. One of the great needs of our Southern country is a population sufficient in numbers, in health and vigor to develop our magnificent resources, and build up our important interests. If we now had that superb element of population which was sacrificed in the late war, we would need nothing further to restore us to prosperity.

But it is a most gratifying reflection to know that our knowledge of the pathology and treatment of infantile diseases is constantly and steadily advancing towards a plain of more thorough scientific accuracy. I can observe marked changes in these respects for the better in the past twenty years. Yet, this department of our profession is still far from being complete.

Forms of pneumonia common in infancy.—There are two forms of pneumonia to which very young infants are more particularly subject—the lobar and catarrhal. While *lobar* pneumonia in the infant does not materially differ from that in the adult, in my experience, the attending rôle is rather coarser, and more on the sub-crepitant order, and the dullness on percussion is not as complete. *Catarrhal* pneumonia—formerly existing under the names of suffocative catarrh and capillary bronchitis—is the most common to which infancy is liable, and the most dangerous to life, as it usually involves both entire lungs. In such cases, the secretion of mucus is so rapid, and its accumulation so extensive as to cut off very speedily all ingress of atmospheric air into the air cells. Hence, at a very early stage of these cases we observe the manifestations of carbonic acid poisoning, or cyanosis, and a disposition to drowsiness. I have seen cases threatened with suffocation in twelve hours after the onset of the disease.

In proportion to the accumulation of carbonic acid in the blood, the disposition to narcosis becomes profound, so that the infant appears as if suffering from a poisonous dose of opium. I saw, on one occasion, a little infant of only a week old with catarrhal pneumonia, which presented a complexion almost like indigo. The tendency of carbonic acid poisoning is not only to cause sleep, but also to suppress cough.

The character and rate of respiration.—Probably in no other disease does the respiration rate reach so high a standard as in the pneumonia of early infancy. I am very sure that I have seen in an infant a few days old, with pneumonia, the frequency of respiration reach one hundred per minute. In

proportion as the air cells and bronchioles fill with accumulating exudation, the inspirations become shorter in duration and interval, and, of course, the respiratory acts are more frequent and less efficient. In these very grave cases of infantile pneumonia, the acts of respiration become so rapid and short that the inspired air, to the observer, does not appear to penetrate more than one-third of the lungs. We often hear adult patients with serious pectoral affections use the expression that they could inhale the air to a certain point in the chest only, denoting precisely the line of demarcation between the sound and diseased tissue. This is literally true of all chest affections causing obstruction. No sooner does the inspired air enter the cells than a decided sense of relief follows, and the chest walls expand in corresponding degree. If we expose the chest of an infant suffering from extensive catarrhal pneumonia, it will at once be observed that the walls around the bases of the lungs are not expanding as they should do, but that the muscles of the apex of the chest, also those of the neck and back, are thrown into an extraordinary state of action by the powers of volition, for the purpose of still further dilating the lungs.

The character of cough in infantile pneumonia.—In proportion to the extent and gravity of pulmonic disease, the attendant cough will diminish in frequency and force, and decline in aiding expectoration. A very serious danger to be apprehended during the progress of infantile pneumonia is the partial or entire suppression of cough. This may be brought about either by the effects of carbonic acid poisoning, or narcosis from the too free use of opium. Under these circumstances, the infant rarely voluntarily takes those deep inspirations which distend the lungs, aerate the blood, and excite cough and expectoration.

In this connection, I think it proper to state that in those cases where the cough is either suppressed or insufficient in promoting expectoration, it is my invariable custom to resort to artificial means for the purpose of stimulating that function. The agents used are decidedly antiseptic in character, and exert the double influence of disinfecting the accumulated matter in the bronchial tubes, and exciting these tubes to active contraction, and the expulsion of the offending cause, to the great relief of the little patient. My habit invariably, in this class of cases, is to use every three or four hours, or even oftener if necessary, by means of a continuous spray-producer, a solution composed of

R. Alcohol.....	℥j
Water.....	℥ij
Carbolic acid.....	℥ss
Bicarbonate soda.....	℥j
Salicylic acid.....	℥j
Chloral hydrate.....	℥ss. ℥.

The atmosphere surrounding the head and chest of the patient is to be

charged with the spray of this solution as often as it may be necessary to excite cough and expectoration for a few minutes at each time.

The invariable result in my experience has been the restoration of cough and free expectoration, for the time being, with improvement in the breathing and complexion. By the persevering use of this device, I feel sure that on several occasions I saved the lives of children that would otherwise have been lost.

I remember, on a certain occasion, having for a patient a most interesting little boy of two years old, who had endeared himself to all by his exceeding brightness of character and amiability of temper. He was suffering from a fearful attack of double catarrhal pneumonia and whooping cough combined. He suffered terribly for many days from suppression of expectoration and great oppression of breathing. The cough was very slight, and only occasional. There were crepitant râles over the entire of both lungs. The pulse and rate of respiration were exceedingly frequent, and the complexion of a dusky hue. For the purpose of restoring cough and expectoration, the atomizer was used freely every three hours, and at times oftener—not only with infinite temporary relief, but, I am convinced, with the ultimate result of saving the life of the patient.

To stand by the bedside of these helpless little creatures, suffering a fearful degree of agony from oppression of breathing, with a respiration of seventy per minute, and a pulse amounting to one hundred and sixty or seventy, and witness the relief afforded by the simple use of the antiseptic spray, is exceedingly gratifying.

Character and rate of pulse.—Dr. West says that it is unusual for the pulse in infantile pneumonia to reach one hundred and eighty per minute. Other authors, with the more accurate methods of calculating at present, say that it frequently attains a rate of two hundred, and even two hundred and twenty-five in bad cases. The rate of the pulse and respiration never reaches these high figures in the adult. Hence, we have a state of affairs, so far as these questions are concerned, differing entirely from the pneumonia of the adult.

Now, the question is, what are the effects of these very high rates of the pulse and respiration on the progress of the case? During the very rapid action of the small and feeble infantile heart in pneumonia, each diastole is so brief and imperfect that very few drops of venous blood can be received into the right chambers of the heart at each pulsation. Thus, while the heart may be acting at the rate of two hundred per minute, each two pulsations are not equal in efficiency in propelling the column of blood forward through the circle, to one pulsation when the organ is acting at the rate of one hundred per minute. The practical result is the blood constantly tends to accumulate in the venous system, producing cyanosis, and its conse-

quences, carbonic acid poisoning and narcosis, with labored breathing; while the arterial system, failing to receive its due share of oxygenated blood, induces the small, feeble and frequent pulse characteristic of this condition, with the extreme general prostration which always attends this state. The pulse in infantile disease not uncommonly attains a rate of frequency more than double that of health, and yet this may be followed by a complete restoration.

Medical men, from practical experience, well know how delicate the infantile system is, and yet how wonderfully elastic it is in its recuperative energies. The nervous systems of children, whether volitional or sensitive, are exceedingly excitable. But the ganglionic system is intensely emotional, giving rise to that remarkable excitability of the heart which we see manifested in our daily intercourse with these little patients, elevating the pulse, even in slight febrile conditions, to a fearful degree of frequency, the violent impulse of the heart resembling that from hypertrophy, while every superficial artery in the body can be seen in violent commotion. This remarkable excitability of the varied component parts of the nervous system of infants and children, with their emotional tendencies, constitutes one of the most important considerations in the history and treatment of infantile diseases. These peculiar characteristics are prone to mask all other symptoms, whether of functional or organic disease, to such an extent as to obscure the real difficulty and mislead us in forming our opinions. The extent of pneumonic inflammation which would elevate the rate of respiration to thirty and the pulse to one hundred and twenty in the adult, would, in the young infant, send the rate of respiration up to a hundred, and the pulse to the neighborhood of two hundred per minute. Taking the adult rates in these respects as our standard for guidance, the excessive rates above these in the infant must be regarded as attributable to the remarkable excitability of the sympathetic system of nerves peculiar to that period of life.

A knowledge of this fact in the treatment of infantile disease is of infinite importance. If we were to use violent or depletive means for these explosions of nervous force and excitability in the inflammatory diseases of infancy, we would simply induce a state of general prostration without removing the cause; whereas, if means are used to control this extraordinary erethism of the sympathetic system, and through these reducing the excessive cardiac and respiratory action, we at once bring the state of the system to a safe point for the resolution of the local disease.

The tendency to clonic convulsions in the febrile affections of infants is another example of explosion of nervous force and excitability in the volitional and reflex centres, as the great frequency of the action of the heart and respiration represents that of the ganglionic system.

Treatment.—With all our preconceived ideas of the prompt and vigorous measures necessary to subdue a violent attack of pneumonia in the adult, I confess to have formerly approached the treatment of this dangerous disease in the feeble and delicate infant, whose life apparently hangs upon a mere thread, with a considerable degree of misgiving. Since adopting the method which I now resort to in these cases, my practice has been far more satisfactory and successful than formerly.

The great and pressing objects to be accomplished for the speedy relief of the patient in these cases, are to disgorge the bronchioles of superabundant mucus, reduce frequency of the pulse and respiration, and at the same time sustain the strength of the heart and its force of action. Nothing should be done in this affection to impair the force of the heart's action. Fortunately for us, there are remedies at hand which will not only reduce abnormal frequency of the pulse and respiration, but will, at the same time, give tone and vigor to every pulsation of the heart. With these objects accomplished, and proper sustenance of the patient, resolution of the pulmonary engorgement and inflammation will usually follow.

I cannot present a better illustration of the line of practice which I have pursued in these cases in recent years than by giving in detail the history of a case of double pneumonia, very alarming in character, occurring in a little infant only three weeks old:

When I first saw this case, the pulse was so rapid and feeble that I could not even approximate the rate, and scarcely detect it at the wrist. The respiration must have been nearly one hundred per minute. The complexion was completely cyanosed. There were universal subcrepitant râles throughout both lungs, and dulness over both bases. The chest walls, on inspection, scarcely expanded at all. No one supposed that the little creature could survive but a few hours. The family discussed the question seriously whether or not, the chances of life being so limited, it was justifiable to vex and annoy the infant with treatment. At my earnest solicitation, vigorous measures were put in practice, and the result was the saved life of a boy now several years old, and in the full vigor of health. A warm mustard bath was ordered to be used every four hours, to be followed by brisk frictions with a dry flannel. The patient was to take a teaspoonful of the following mixture every three hours, viz.:

R. Liq. ammon. acetatis.....	3ij
Tinct. belladonna.....	gtt. xii
Tinct. digitalis.....	gtt. xii
Spts. ammon. arom.....	3iss
Vin. ipecac.....	gtt. xvi
Aquæ.....	3x
Syr. acaciæ.....	3vi. ℥.

The antiseptic spray was also ordered every four hours. A few drops of good brandy were given with each dose of the mixture. Small dry cups were applied over the dorsal portion of the chest. The effects of this treatment in forty-eight hours were marvellous.

Of all those agents for slowing the excitable and feeble infantile heart

in pneumonin, and reducing the high pulse rate down to the natural standard, and imparting vigor and tone to its action, digitalis stands first on the list. It has not the rapid and dangerous action of veratrum and aconite, but in the end is just as efficient.

I regard belladonna, used in connection with digitalis, as a most important element in the therapeutics of infantile pneumonia. In this connection it exerts a most soothing and quieting influence over the irritable condition of the sympathetic system, not only aiding the digitalis in composing the action of the heart, but especially reducing the high rate of respiration, and thereby affording relief to the oppression of breathing. Belladonna is well known to exert a remarkable influence in curtailing superabundant secretion, whether from the skin, intestines or lungs.

I feel sure that this power is exerted in a very decided degree in gradually diminishing the excessive secretion of mucus in catarrhal pneumonia, and thereby preventing renewed pulmonary obstruction. It is one of the few agents in our possession which accomplishes this object without either suppressing cough or embarrassing the respiration, or aggravating the bronchial inflammation.

The mild preparations of ammonia are particularly valuable in liquifying viscid mucus and hastening its expulsion. As a sustainer of the exhausted and flagging nervous energies of the infantile constitution, it is almost invaluable in the treatment of this disease.

The wine of ipecac, in my judgment, should never be dispensed with in the treatment of the pneumonia of infancy. Whenever given in minute doses continuously, it acts as a potent promoter of expectoration, inducing contraction of the bronchial tubes, and the gradual expulsion of mucus.

In a most obstinate case of catarrhal pneumonia, in an aged woman, which resisted every known remedy, with constantly increasing severity of symptoms, accompanied with a very irritable stomach, in utter despair I determined to put the case on minute doses of ipecac wine—say two drops every three hours. In twenty-four hours there was marked improvement in the respiration and pectoral oppression, and in the freedom and ease of expectoration, with relaxation of skin. Under this remedy, slightly increased in dose, the patient entirely recovered.

We know now that ipecac exerts a very extended influence over the entire sympathetic and vaso-motor systems, and by quieting nervous excitement and vascular action, it controls hæmorrhage and regulates secretion. The combination of the alkalies—ammonia, soda or potash—with the ipecac, particularly the former, constitutes, in my experience, the very best of means for enabling the bronchial tubes to expel their contents in pectoral

inflammations. Opium, when the moist râles are abundant in infantile pneumonia or bronchitis, is inadvisable and dangerous.

In forming an opinion of the admissibility of opium in these cases, we must be guided by the extent of tissue involved and the extent of râles present. If these are extensive, then opium must be discarded. The bromides here are specially applicable for quieting nervous restlessness and procuring sleep.

In lobar pneumonia, when the muco-febrinous secretion is very tenacious, I have used the iodide of potash, iodide of ammonia, spirits of ammonia and ipecac with the best effect.

Dr. J. E. Chancellor reported a case in his practice which confirms Dr. Brown's views.

VOLUNTEER PAPER.

CASE OF

URETHRAL STRICTURE OF TWENTY YEARS' STANDING

CURED BY

THE VIS MEDICATRIX NATURÆ.

By HUGH T. NELSON, M. D., Charlottesville, Va.

William B., white, farmer, aged 62½ years, had several attacks of gonorrhœa when a young man, and twenty years ago he began to experience difficulty in passing water, though he had, in the main, managed comfortably till the 4th of May last, when he became the victim of *retention*. He was seen on the evening of that day by Dr. R. W. Nelson, of Charlottesville, but had been relieved before the doctor reached his house—some eight miles from town. The penis was very large, and seemingly œdematous, but with little trouble a No. 5 bougie was introduced, passing, on its way to the bladder, three cartilaginous strictures, one embracing about an inch of the urethral extent.

Mr. B. was advised to come to town for treatment, but being able to overcome vesical distension by frequent and prolonged straining efforts, he did not put in his appearance till the 9th, when such efforts had proved ineffectual for several hours before he reached our office. He presented on his arrival a physiognomy expressive of severe pain and weariness, and very great difficulty was experienced in finding the urethra, on account of the contracted state of the strictures, due in great measure, doubtless, to their irritability. The No. 5 bougie was, after much careful manipulation,

introduced into the bladder, and after remaining *in situ* some ten minutes, was withdrawn, and a small gum catheter passed, which emptied the viscus perfectly, to the great relief of the patient, though the eye of the instrument cut the urethra a little as it was withdrawn. The patient now called our attention to an enlargement in the corpus spongiosum, and examination revealed about the middle of the portion of the urethra, posterior to the peno-scrotal junction, and consequently covered by the scrotal tissues, what seemed to be a fibroid growth, of the size of a pullet's egg, corresponding to that portion of the track which offered the greatest resistance to the bougie. With this exception, the penis had lost the great size mentioned above.

Mr. B. again presented on the 10th, and thought he had passed as much water as usual, though always by prolonged and violent straining. The bougie was passed with even greater difficulty than on yesterday, the stricture grasping the instrument so tightly as to prevent doing more than to pass its beak into the bladder, and necessitating a surprising amount of force to be expended in its withdrawal. The same catheter was then introduced as before, but was so much compressed by the stricture upon withdrawal of the stylet that neither did any urine appear, nor could the stylet be re-introduced. Until the re-introduction of the wire was attempted, it was supposed that the refusal of the urine to flow through the catheter was due to its having become clogged by blood—there having been slight hæmorrhage upon the withdrawal of the bougie. In fact, unusual difficulty had been experienced at the prostatic portion of the urethra at this sitting, and though the force employed was of the gentlest kind, some little laceration must have occurred; though the laceration and consequent hæmorrhage were more probably due to the dragging down the urethra in its spongy portion in consequence of the tight grasp of the stricture upon the instrument at the commencement of withdrawal. The grounds upon which this theory is based will appear as the history of the case progresses.

The rubber catheter was withdrawn after a considerable interval, and as there was still some vesical distension, a metallic instrument was employed, the eye of which occasioned considerable hæmorrhage before the prostatic portion of the urethra was reached. Nor did the instrument reach the bladder at all, though in consequence of all this effort the irritability of the strictures became worn out, and a copious discharge of clear urine took place.

May 11. Bougie introduced, only its beak entering the bladder. Its withdrawal, after remaining ten minutes in the urethra, was effected without loss of a single drop of blood, and followed by a free passage of urine. The tumor seemed smaller.

May 12. Bougie again used, with like results as on yesterday, though its introduction was more nearly complete, and attended with less difficulty. Some rotation of the handle of the instrument was observed, as if the right lobe of the prostate gland were enlarged. The patient did not present on the next day, but was out on the street, and said he was so much better that he thought he would go home on the next day.

May 14. About 12 o'clock the Doctor was summoned to the old man, who, for several hours, had been straining violently in efforts to pass water—the relief obtained being infinitely out of proportion to the effort. The scrotum was found enormously distended, its integument very much thickened and reduced; and, as no “bogginess” or fluctuation was detected, the diagnosis was “erysipelas, involving both superficial and deep tissues.” The possibility of urinary infiltration was lost sight of; but as the perineum was not in the least involved, this was excluded. The bougie was passed as before with relief, the parts wrapped in cotton wool and well supported, and the patient put on supporting treatment. Looks wretchedly.

May 15. A large patch of gangrene occupied about three-fourths of the now enormously-distended scrotum, beginning about one and a-half inches from the perineo-scrotal junction posteriorly, and extending more than half way between the bottom of the mass and the peno-scrotal junction in front, embracing the lateral aspects to a corresponding degree; and from the blackened, dead mass, already denuded of its cuticle, a saniores, foetid ooze was escaping, somewhat modified by the carbolized dressings employed. The bougie was introduced, and upon its withdrawal some four ounces of natural-looking urine passed. The patient was put upon full doses of quinine and iron, all the milk punch and egg-nogg that he would take, and beef-soup *ad libitum*, which he was to be encouraged to drink; warm carbolized dressings were directed to be continuously applied, and the weight of the mass to be suspended by a *sling*.

On *May 16*, the patient was seen early in the morning, when there seemed to be no further extension of the gangrene, and a line of demarcation was beginning to form; but the erysipelatous inflammation was extending up on the pubis, although the perineum was still perfectly natural. This evening Prof. J. Staige Davis, of the University of Virginia, was present in consultation, and diagnosed *infiltration of urine into the scrotum, consequent upon rupture of the spongy urethra, and gangrene resulting*. He advised a modified external urethrotomy, which was at once done by Dr. R. W. Nelson.

A bougie was introduced as far as practicable into the urethra, and a long, gorget-shaped knife thrust into the gangrenous mass just anterior to the posterior line of demarcation. The incision was in the middle line, from behind forwards, and there was a gush of urine before the knife

reached the staff, though upwards of ten inches of tissue was penetrated before any urine appeared. More than a pint of urine poured from the incision, and several ounces of pus were emptied from sacculated cavities in the scrotal tissues. It was now deemed unnecessary to make the incision into the urethra, as it was evident that the rent in that canal was nearer its meatus than the point of projected incision, and free drainage was already provided for. The parts were freely feathered with carbolized olive oil, and warm poultices were applied; the amount of quinine was increased, and frequent washing of the parts with cold, carbolized water enjoined.

May 17. Patient had passed quite a comfortable night, and the œdema in the non-gangrenous tissues seemed less. A free discharge of urine was taking place through the wound, and some was passed through the meatus.

May 18. Patient had slept well; pulse and respiration very good; countenance less drawn and haggard; not much appetite, and very drowsy; in fact, sleeping all the while unless roused. Some evidences of separation of the slough on the right side, while the contiguous tissues were still œdematous and angry-looking.

May 19. Condition somewhat improved; more appetite and less drowsiness; some urine still passing out through the fistula, and along the line of separation, which had already formed to a considerable extent. The right testicle was partially exposed, covered with a creamy-looking pus, and the entire mass was very offensive. More urine was passed at the meatus than for some time. The patient complains of violent pain in the left hip on any movement, and the dribbling of the urine had produced an excoriation on the internal aspect of the right thigh.

May 20. Patient very comfortable; separation taking place very rapidly, and a very marked decrease in the amount of urine passed otherwise than naturally.

May 21. Prof. Davis saw the patient again. Pulse excellent, and general condition very encouraging indeed. The slough had almost entirely separated from the non-gangrenous tissues, and while these still presented great thickening, they were decidedly less red and œdematous. It was now evident that the scrotal mass involved in the slough embraced the integument, dartos, infundibuliform and cremasteric fasciæ, so as to expose the testicles covered only by the tunica vaginalis. This serous membrane, as far as could be seen, was covered with a creamy-looking pus, and some little urine was escaping between the tunica vaginalis and the non-adherent external envelopes. The entire slough was now severed from the sounder tissues, and the loose areolar tissue, by which it was still, in a measure, adherent to the vaginal tunic, carefully divided, and the removal of the large, putrid mass effected, exposing to view the left testicle in its entirety, and the right

for more than half of its extent ; after which, by gently lifting the organs, the absence of connection between them and the remains of the scrotum almost allowed a view of the external abdominal rings. The parts were ordered to be well washed frequently, and to be kept dressed with carbolized oil ; and supporting treatment continued.

May 22. Patient has been much more comfortable since removal of the slough, and is in good condition, and the exposed coverings of the testicles have a more healthy appearance. Prof. Davis had advised that the patient be taught to use the catheter himself, and never allowed to attempt emptying the bladder otherwise. This was advised with a view of preventing the passage of any urine through the fistula, and looking ultimately to a radical cure of the track by passing along it a silver probe coated with fused nitrate of silver. There was no evidence to day, however, of the passage of any urine by other than the natural avenue, and so he was let off from the catheter.

May 23. Patient improving ; the right testicle almost within the grasp of the scrotum, and the left not more than half exposed, the scrotal tissues themselves bearing a much healthier aspect, with but little pus upon the vaginal tunic of either testicle. Pain in hip is still very distressing at times.

May 24. Doing excellently ; countenance bright, and complexion very much clearer ; appetite good ; abrasion on right thigh entirely healed ; not *one drop of urine* passed otherwise than naturally, and this in a good stream, amounting to more than a half pint at one time. The edges of the wound are healthy and granulating well.

May 25. Patient about same, though thinks he feels a little stronger, and passes water naturally. Passing from granulating edges of the scrotum, and extending downwards for about ten lines, there was observed in the left testicle a reddish, plastic-looking material agglutinating the tegumentary structures to the serous covering of the organ in its whole circumference ; and while healthy granulations were observable on the margin of the coverings of the right testicle, this peculiar appearance was wanting. In fact, these granulating edges were rather below the most dependent portion of the right testes, and this tegumentary extension, whereby the testicles are being gradually more covered in, seems to have been acquired in a measure at the expense of the penile integument ; so that this organ had the appearance of being drawn downward by the tightness of its integument retracting upon the frænum.

May 26. Patient up and about his room.

May 28. Patient's condition in every way satisfactory. Adhesion has taken place between the scrotum and both testes anteriorly and externally, though the posterior scrotal flap still lies loose upon the perineum when the organs are held up, and a large, granulating cavity was observed, com-

posed in part of the site of the septum. In many spots the vaginal tunics seemed already covered with a cutaneous structure, and all the urine passes *per vias naturalis*.

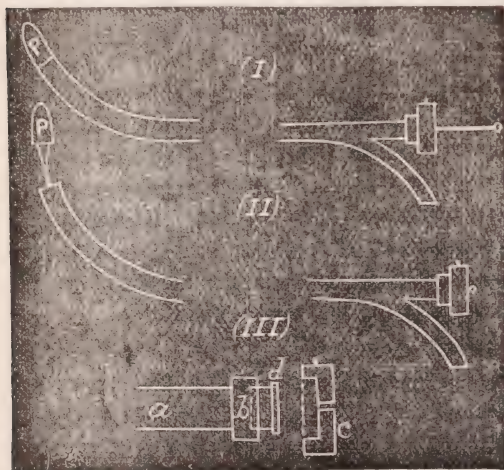
May 31. Improvement going on rapidly, and the scrotal tissues, by some process of extension, are covering in the testicles more and more.

June 3. Scrotal tissues covering well the outside of both testicles, and the lower extremity of the right, though the parts originally covered by contact with the inter-testicular septum are still bare, but granulating nicely. An adhesive strip was used to draw these surfaces together, and on the 5th the old man went home in a spring wagon, in good spirits.

July 25. Mr. B. presented at the office to-day in perfect health. Both testicles are enclosed in a good but rather scant scrotum, while a decided puckering occupies the site of the original raphé. No stricture remains, but he passes water more freely than ever before in his life; yet perfect erection is impossible, in consequence of the scantiness of penile integument, and the sharp downwards incurvation which is thereby occasioned.

In connection with this subject, we would call the attention of the profession to a urethral instrument as designed, made and used by Dr. R. W. Nelson, of Charlottesville, Va. This instrument, though by no means perfect in its make, has been used with success, where a metal catheter, made to order as regards the eye, almost invariably produced hæmorrhage, and when even a like result followed the withdrawal of the soft rubber catheter. In these conditions of the urethra accompanied by relaxation and engorgement of the mucous membrane, any instrument with an eye will sometimes produce quite serious hæmorrhage, whereas the introduction of a bougie does not produce this complication.

DR. R. W. NELSON'S CATHETER BOUGIE.



(I) Instrument ready for introduction.

(II) Instrument after introduction; the steel point *P* screwed up so as to empty bladder.

(III) *a* Distal end of catheter surmounted by rim *d*, against which the collar *b* fits closely. *c* Screw-cap perforated with a threaded orifice, fitting over the collar *b*, and fastened to it by a small screw.

This instrument is nothing more than an ordinary metallic catheter, the proximal end of which is cut perpendicular to the axis of the tube, and surmounted by a steel point attached to a steel wire, which point is so adjusted by the screw-cap on the distal end of the instrument, as either to open or perfectly close the orifice at the proximal end. When closed, the instrument is a perfect *bougie*, and is always introduced as such; after which, by working the screw-cap, the steel point will be raised, and the contents of the bladder evacuated, when the instrument is to be withdrawn *before closing up the vesical end*.

REPORT OF THE NECROLOGICAL COMMITTEE.

JOHN S. APPERSON, M. D., Town House, Va., Chairman.

Since the last meeting of the Society, notices of the death of two Fellows have been received—Dr. Orlando Fairfax, of Richmond, Va., and Dr. Jas. A. Johnston, of Berghs Mills, Va.

In the report of the Recording Secretary last year, Drs. D. M. French and Wm. B. Klipstein, of Alexandria, Va., are reported to have died, but this Committee were not apprised of the fact, and consequently the names of the deceased were not embodied in the report of the Committee. It is expected, however, that suitable memoirs will be obtained in time for the next Transactions of the Society.

Your Committee is indebted to Dr. R. T. Coleman, of Richmond, Va., for the following notice of the life and death of Dr. Fairfax :

Dr. Orlando Fairfax was born in Alexandria, Va., on the 24th of February, 1806, and died in Richmond, Va., on the 11th day of January, 1882. He entered the University of Virginia on its opening session, and there received his academic education and his diploma as Doctor of Medicine. He subsequently attended a course of medical lectures at the University of Pennsylvania. He married his cousin, May Randolph, daughter of Wilson Jefferson Cary, of Carysbrook, Fluvanna county, Va., on May 21st, 1829. He was a leading physician in Alexandria until the war, when he removed to Richmond, and there practised his profession up to the time of his death.

The following just tribute to Dr. Fairfax, prepared by Dr. R. T. Coleman, his intimate personal friend, was unanimously endorsed by the profession of Richmond, and will be by all who knew the deceased, and is adopted by your Committee :

"The accustomed preamble and resolutions—that formal and unmeaning parade of words after death—are out of place here. When it is told that Dr. Orlando Fairfax is dead, to those who knew him all has been said that need be said. To those who knew him not, eulogy could not bring the respect and affection which, toward a man so modest, even personal and intimate acquaintance barely served to draw forth in deserved measure. His life is his eulogy. In contemplating that life, from the beginning to its close, enthusiasm is with difficulty repressed. He was of a house so ancient and so blameless; he was himself so true in every action to the stock from which he sprung—upright, steadfast, manly, simple—in a word, he was a Christian gentleman of a type so high that none is higher. As a Virginian, a patriot, what was he not? Whatever he had, and all that he had, was his country's, freely given, and lost without a murmur. As a physician, he had a love for his calling that always brings skill, and an ardor that, in his 76th year, led him to a course of reading as if he had but begun to learn a science in which for half a century he had stood so high. As a man, he was all a husband, father, friend could be. Love for his household was but a part of the great love he bore to the whole brotherhood of man. Alike, in his home and in the discharge of the arduous duties of his calling, he showed a devotion which few might equal and no one could surpass; not merely a sense of duty, but a delight in duty; the warmth of his heart so animating and quickening the intellect that his very presence in the sick chamber diffused a glow of mingled light and heat, a radiance of peace and hope which those who once experienced can never forget. Pure and truthful, he inspired absolute trust in all with whom he came in contact. His great professional knowledge was obscured by the gentleness of his manner—the doctor was forgotten in the friend. Beyond men, beyond most women, he was modest. His virtues shrank from the light, and the course of his life was like a meadow-stream hidden by flowers, which diffuses blessings, but flows on unseen. He never sought self, and his very silence made report of him. Ripe in years, firm in the faith of his fathers, mature in wisdom, acquainted but too well with human affliction and the vanity of life, beloved and honored, the good and faithful servant, having done his Master's work well, has entered into his rest. He leaves to his children the unspotted name of his house, to his professional brethren the example of a life, long and perfect in its unselfishness, and to his State and section the memory of a patriotism that spared not anything, neither the blood of his best-loved sons nor the last ounce of what he counted as dross in the balance—his worldly wealth.

Dr. R. D. Huffard, of Chatham Hill, Smythe county, Va., has kindly furnished the following with reference to Dr. Ward:

Dr. E. B. Ward.—Died at Chatham Hill, Va., April 21st, 1881, of pneumonia, Dr. Erastus B. Ward, in the 57th year of his age.

The deceased was born in Tazewell county, Va., March 13th, 1825, of Alexander and Jane Ward. He received his primary education at Hiawassa College, Tennessee. In the year 1848 he commenced the study of medicine in the office of Dr. William O. Floyd, of Wytheville, Va., where he remained until the fall of 1849, when he entered the medical department of the University of Virginia. In 1850-1, he attended lectures at the Jefferson Medical College of Philadelphia, where he graduated, and then located at Liberty Hill, Tazewell county, Va., where he practised his profession successfully for eighteen years. In the spring of 1879 he moved near Marion, Smythe county, Va., where he remained a little over two years, and then located at Chatham Hill, where he continued the practice until the time of his death.

As a citizen and physician, he is greatly missed, especially by the poor, who always found in him a valued friend. His kind words of cheer and comfort, as well as his skill as a physician, always made him a welcome visitor to the bedside of the suffering. As a member of the church, his Christian walk was always exemplary, and his interest in its welfare lively. His piety was especially unobtrusive, yet manifest in every department of his life. His last sickness he bore with Christian fortitude, and without a murmur—endeavoring to the last to cheer the grief-stricken ones by his bedside, anticipating from the beginning the sad result. He died calm and peaceful, his last words being, "I have not a shadow of a doubt or fear."

Thus has passed away from the toils of earth to an everlasting rest, as we believe, one who was the light and cheer and support of a happy home, respected, loved and honored by all who knew him.

PROCEEDINGS.

FIRST DAY—AFTERNOON.

FAUQUIER WHITE SULPHUR SPRINGS, VA., *Sept. 13, 1882.*

The Thirteenth Annual Session of the Medical Society of Virginia convened in the Ball-Room of the hotel at the Fauquier White Sulphur Springs, Va., Wednesday, September 13th, 1882, at 3.45 P. M.

The meeting was called to order by Dr. W. L. Robinson, of Danville, Va., First Vice-President, who stated that he assumed the chair because of the President, Dr. G. Wm. Semple, of Hampton, Va., who was prevented from attending on account of personal illness. Dr. Landon B. Edwards, of Richmond, Va., the Recording Secretary, was in his chair.

Dr. J. W. McIlhaney, of Warrenton, Va., introduced Hon. James V. Brooke, of Warrenton, who delivered the following *Address of Welcome*:

Gentlemen of the Medical Society of Virginia:

It has been made my pleasant duty, on behalf of your brethren of Piedmont Virginia, of "mine host" of the "Fauquier White," and of our community at large, to extend to you a hearty welcome to this delightful retreat; and to assure you that your presence amongst us is hailed with the liveliest emotions of satisfaction and joy. Yet I cannot but wish that this honor had been more worthily bestowed. The *cacæthes loquendi*, so characteristic of youth, weakens with the advance of years, until at last one comes to feel again, in its full force, the sentiment uttered in his boyhood—

"You'd scarce expect one of my age
To speak in public on the stage."

And besides all this, I know that there are members of your honored profession, dwelling within the shadows of these grand old mountains, who could have discharged the duty devolved on me with far more of grace and eloquence than I can boast.

Indeed, I was earnestly urging this view of the matter the other day, when I was interrupted by an impudent wag, who insisted that it was exceedingly appropriate for a *lawyer* to welcome the *doctors*, and when pressed for his reason, said that they were engaged in the same line of business—that the doctor *administered his physic* till the patient died; and then the lawyer *administered the estate* until that was likewise defunct.

But, seriously speaking, I regard the compliment tendered me as nothing more

than the recognition of a grand principle—and that is, that between the learned professions there are, or should be, ties of fraternal sympathy, binding them together as with “hooks of steel,” and constituting them into one great “brotherhood of science.” Whether regard be had to the science of Divinity, of Medicine, or of Law, truth demands the concession that the grand object of each is the promotion of human happiness. In them and each of them is found as much of self-denial and as little of self-aggrandizement as can be predicated of any of the active businesses of life. It is the office of the first to deal with those spiritual and moral maladies which have sprung from “*man’s first disobedience, and the fruit of that forbidden tree, whose mortal taste brought death into the world, and all our woe.*” To the second is assigned the duty of guarding man’s physical and mental organism against the myriad forms in which disease invades the citadel of life, or shakes the throne of reason; while the last, with bandaged eyes and holding aloft the scales of justice even-poised, seeks to ensure the protection of those rights which are man’s natural and inalienable inheritance, or which have been created for him by the laws of well-regulated social life.

Not only is there thus identity of aim and object between the learned professions, but there is also similarity of occupation. The main labor of each is brain labor. I do not mean that there is not physical labor as well. I do not lose sight of days of toil, of nights of weary watching, of tiresome journeyings to and fro in paths of professional duty. But with the earnest votary of science the most wearing efforts are those which are pursued in the solitude of the study, and by the light of the midnight lamp, while the world around is wrapped in the oblivion of slumber, and no eye save that of the great Invisible watches the ardent toiler after truth, till “*nature’s sweet restorer, balmy sleep,*” is driven from the tired eyelids by the very exhaustion that demands her aid. It is true the outside world does not appreciate labors like these, because it neither sees nor understands them. It generally makes its estimate of values from a standpoint purely material, and can’t see why a lawyer or doctor should charge ten dollars for an hour’s work, when an able-bodied man can be hired to maul rails or dig ditches at a dollar a day. Brain put on a level with muscle, and long years of patient study and costly preparation counted as nothing in the comparison of values which the world makes!

Indeed, the world goes further than this, and makes the learned professions the special objects of its ridicule. It is wonderful what a propensity is found in the *profanum vulgus* to have a laugh at their expense. It was but the other day that I saw a conundrum propounded in a very respectable newspaper—“*Why do doctors write their prescriptions in Latin?*” And what do you suppose was the answer?” Why simply this: “*Because it is one of the DEAD languages.*” You see the covert insinuation. If the author could be discovered, he should be subjected to condign punishment. A dose of “*calomel and jalap,*” if the impressions of my childhood are correct, would teach him a lesson for the future never to be forgotten.

The lawyer fares even worse. “Want of veracity” is the objective point in his case; and he has been joked upon in this respect until I verily believe the average opinion of mankind has settled into a conviction that the lawyer lives by lying, and that if he tells the truth it is matter of accident, or else he is well paid for it. The old preacher was evidently of this opinion, who, in giving out his text, “*Every liar shall be turned,*” &c, read it “every lawyer;” and when asked to correct his mistake, said it was too trifling an error to need correction.

But the world ceases to be funny at our expense when either the doctor or the lawyer is wanted. A slight twitch of sciatica or the sight of the sheriff’s hammer, dispels all humorous emotions; and the doctor or the lawyer (as the case may be) swells into the proportions of a demi-god, and is regarded with a reverence near akin to worship.

I have glanced at some of the ties of sympathy by way of emphasizing a further proposition, which is this: *If it be true that they exist between the different professions, how much closer and more intimate should be the fellowship existing amongst those who worship at the same altar of science!* Not only natural in itself, but how potent for good to the world is the principle of *association*, springing from this spirit of fellowship, embodying itself in these social forms, which will best secure mutual respect and confidence; and by consultation and comparison of views, educing from varied experiences the indubitable truths of science!

If “*in union there is strength,*” then there is a power in associations like yours which cannot be wielded by separate and segregated effort. The rill that leaps from

the mountain side may be insignificant in its proportions. A child may stem its flow with the flowers that bend above it. But as it sparkles on through copse and meadow, other rills mingle with it; and then, a streamlet, it seeks the companionship of other streamlets, until at last the majestic river is seen rolling grandly to the sea—its banks vocal with the hum of industry, and its bosom laden with a commerce that shall help enrich the world.

So medical phenomena, presenting themselves singly, one here and another there—one to this enquirer and another to that—though seemingly unimportant, when viewed each by itself, may, when taken together and subjected to the processes of analysis and combination, be found to constitute a concrete, symmetrical and harmonious department of scientific truth. It is in the contact of mind with mind, or (if you please) in the friendly concussion of mind with mind, that these sparks of truth are scintillated, which combine at last into some grand system of philosophy, and fill the dark places of error with their gladsome light.

In view of these unquestioned truths, I hail with pleasure the existence and growth of your Society. I trust that it may prove a blessing to the Commonwealth whose name it bears, to the profession whose interests it is intended to promote, and to mankind at large, in the development of professional brotherhood, in the creation of an elevated *esprit du corps*, and in the perfecting of that science which, next to religion, is entitled to the highest place in the estimation of mankind.

Allow me, then, once more to welcome you to the sweet surroundings of this sylvan retreat. I can conceive of no place more suitable for your gathering than here, where you may inhale, in all its freshness, the pure air of the mountains, and quaff the health-giving waters that gush from the vale below. I believe that the tendency of your profession in modern times is to ascribe to the "*vis medicatrix nature*" an importance which has not always been accorded to it. Indeed, it is from the storehouse of *nature* that medical science mainly draws in the preparation of her pharmacopœia. From tree and shrub and plant and flower flow out those healing essences which "old earth" distils in her hidden alembics for the use of man; while fountains having their springs amid the secret recesses of buried strata break forth from her surface to strengthen and restore his wasted energies with their refreshing streams. *Here* you have the *vis medicatrix nature* in all its perfection; and if anything need be added to the natural element, I am sure you will find it in the admirable appointments of your admirable host.

It is recorded that the temples in honor of your illustrious predecessor, *Æsculapius*, were erected "in healthy situations, on hill-sides, and in the vicinity of fountains," and that worshippers were expected to offer a cock or a goat as a sacrifice; and amongst the dying words of Socrates we find these: "*Crito, we owe a cock to Æsculapius.*"

We can give you the "healthy situation," and the "hill-side," and the "fountain," and if the "cock and goat" be wanting, we can supply their places with "spring chicken" tenderer than any *Æsculapean* fowl, and a "mutton chop" juicier than any morsel that ever smoked on sacrificial altar in those days of old.

From the "Regimen Sanitatis," published in 1607, I find the following advice:

"Use three physicians still—
First *Dr. Quiet*,
Next *Dr. Merryman*,
Then *Dr. Dyet*."

These are the three resident physicians at the "Fauquier White." *Dr. Quiet* may be found in the cottages, on the lawn, or in the upper stories of the main hotel. *Dr. Dyet* holds his levees on the dining-room floor; while *Dr. Merryman* (sometimes called *Russell*), and whom I would advise you to consult only in extreme cases, presides in the basement.

In conclusion, gentlemen, I have only to say that I trust your stay with us will prove an agreeable episode to the labors of professional life, and that you will carry with you to your homes as pleasant recollections of your brief sojourn as we shall cherish long after you have said "good-bye."

Dr. Wm. L. Robinson returned the thanks of the Society for the welcome so kindly extended, and invited *Hon. Mr. Brooke* to a seat on the stand.

Dr. John V. McKenzie, of Baltimore, presented himself with proper credentials as a fraternal delegate from the Medical and Chirurgical Faculty of the State of Maryland. On motion of Dr. Edwards, he was invited to a seat in the Society, and to participate in the discussions that might arise during the session.

The Recording Secretary read a letter from the President, Dr. Semple, from Coyner's Springs, Va., dated September 11th, 1882, regretting his inability to attend the present session of the Society on account of personal illness. Dr. Semple is now in the mountains of Virginia under his physician's advice. His letter expresses a deep interest in the Society, and his best wishes for its growth, and for the noble objects of its organization.

On motion, the letter was ordered to be filed.

A letter from the Piedmont Medical Association, Orange county, Va., signed by Dr. Robert S. Lewis, President, and Dr. R. M. Slaughter, Secretary, dated September 12th, 1882, was read. The letter requests that the members of that Association be recognized, received and accepted by the Society as an integral part thereof, subject to the rules, regulations and constitution of the same. Delegates were named as having been appointed, etc.

The Secretary explained the nature of the government of the Society—that it was not a delegated body, but composed of members of the regular profession duly qualified by graduation in a reputable college of medicine, and who recognized the “code of ethics” as laid down by the American Medical Association, etc. It was the intention of the Society to enlist the active co-operation of every worthy regular practitioner in the State, and to allow each Fellow an equal right in controlling the affairs of the Society. Each doctor, upon his election to Fellowship, is as much entitled to the honors and privileges of the organization as the oldest member. The distinguished physician of this State, Dr. Harvey Black, for instance, was elected President, by unanimous vote, on the day after his joining. It was moved that the letter of the Piedmont Association be received and filed, and that an official letter of explanation be written to that Association. Carried.

Upon suggestion to the chair that none of the Committee on Nominations of Applicants for Fellowship were in attendance, Dr. Robinson appointed the following gentlemen *pro tempore*: Drs. J. E. Chancellor, C. C. Conway, John R. Wheat, Geo. Wm. Pollard and Bedford Brown.

The Committee, after consultation, nominated the following named gentlemen for fellowship, and their nominations were duly confirmed. [The list includes all the nominations of applicants for Fellowship that were elected during the several days of the session.—*Note by the Recording Secretary.*]

NAMES.	POSTOFFICES.	DATE GRADUA- TION.	COLLEGE OF GRADUATION.	BY WHOM RECOMMENDED.
Dr. A. B. Benson	Etna Mills, King William county, Va.	1859	Jefferson Medical College	Dr. Geo. Wm. Pollard.
" Geo. M. Bowen	Jeffersonton, Culpeper county	1852	Medical College of Virginia.	" Alex. Harris.
" Geo. W. Carter	Markham, Fauquier county	1878	University of Maryland.	" Alex. Harris.
" James M. Caskie	Berryville, Culpeper county	1880	College Physicians and Surgeons, Baltimore.	" L. B. Edwards.
" Wm. H. Coggeshall	Richmond, Henrico county	1872	Long Island College Hospital	" Alex. Harris.
" John G. Cooke	Orleans, Fauquier county	1845	Medical College of Virginia	" L. B. Edwards.
" W. G. Eggleston	Hampton Sidney College, Pr. Edward co.	1881	College Physicians and Surgeons, N. Y.	" J. P. Slaughter.
" Henry Frost	Marshall, Fauquier county.	1859	Charleston Medical College	" J. H. Jones.
" C. C. Gee	Lochleven, Halifax county	1859	Jefferson Medical College	" Joseph A. White.
" C. H. Getzendanner	Staunton, Augusta county.	1880	Southern Medical College	" L. B. Edwards.
" Thos. W. Gordon	Richmond, Henrico county	1880	Southern Medical College	" Bedford Brown.
" W. F. Green	Stafford C. H., Va.	1881	Medical College of Virginia	" Alex. Harris.
" Geo. S. Hamilton	Rappahannock Station, Fauquier county	1854	Jefferson Medical College	" Wm. D. Cooper.
" Alex. Harris	Jeffersonton, Culpeper county	1849	Medical College of Virginia	" L. B. Edwards.
" R. I. Hicks	Casanova, Fauquier county	1856	University of Pennsylvania	" C. V. Robinson.
" Samuel A. Hinton	Petersburg, Dinwiddie county	1879	College Physicians and Surgeons, Baltimore.	" Alex. Harris.
" Thomas M. Hughes	Amissville, Rappahannock county.	1856	Jefferson Medical College	" M. A. Ish.
" Wm. B. Leary	Potomac City, Prince William county	1856	Jefferson Medical College	" Alex. Harris.
" Robert S. Lewis	Culpeper	1877	Bellevue Hospital Medical College	" W. O. Hill.
" J. Ed. Lincoln	Lacy Springs, Rockingham county	1881	Jefferson Medical College	" O. H. Baird.
" John F. May	Waverly, Sussex county	1859	University of Pennsylvania	" W. F. Cooper.
" S. R. McClanahan	Brandy, Culpeper county	1881	Medical College of Virginia	" Lewis Wheat.
" Wm. F. Mercer	Richmond, Henrico county	1868	University of City of New York	" L. B. Edwards.
" Chas. S. Mills	"	1849	University of Pennsylvania	" L. B. Edwards.
" Thos. J. Moore	"	1870	University of Virginia	" L. B. Edwards.
" Beverly P. Morris	Amherst C. H.	1861	Medical College of Virginia	" W. O. Hill.
" John H. Nef	Harrisonburg, Rockingham county	1859	University of Pennsylvania	" W. L. Robinson.
" — Nelson	Danville, Pittsylvania county	1847	University of Virginia	" L. B. Edwards.
" H. P. C. Noble	Richmond, Henrico county	1867	University of Vienna	" H. D. Kerfoot.
" R. P. Page	Berryville, Clarke county	1867	University of Pennsylvania	" L. B. Edwards.
" M. A. Rust	Richmond, Henrico county	1867	University of Pennsylvania	" B. F. Dunn.
" G. W. Schlosser	Gordonsville, Orange county	1867	University of Pennsylvania	" B. F. Dunn.

NAMES.	POSTOFFICES.	DATE GRADUA- TION.	COLLEGE OF GRADUATION.	BY WHOM RECOMMENDED.
Dr. Wm. P. Sebrelle.....	Boykins, Southampton county.....	1872.....	Medical College of Virginia.....	Dr M. L. James.
" Henry Somerville.....	Michell's Station, Culpeper county.....	.....	University of Virginia.....	" J. P. Slaughter.
" R. B. Stover.. ..	Richmond, Henrico county.....	1876.....	Cincinnati College of Medicine and Surgery.....	" L. B. Edwards.
" W. J. Strother.....	Culpeper.....	1871.....	Medical College of Virginia.....	" Alex. Harris.
" Jos. H. M. Sykes.....	Richmond, Henrico county.....	.....	.....	" L. B. Edwards.
" James F. Tait.....	Swoopes, Augusta county.....	1868.....	University of Virginia.....	" G. W. Pollard.
" A. V. Triplett.....	Culpeper.....	.....	.....	" W. D. Cooper.
" Wm. D. Turner.....	Fergusson's Wharf, Isle of Wight county.....	1876.. ..	College Physicians and Surgeons, Baltimore.....	" W. B. Gray.
" John Ward	Warrenton, Fauquier county.....	1848.....	University of Pennsylvania.....	" Alex. Harris.
" C. P. Wertenbaker.....	Hanover C. H.....	1882.....	University of Virginia.....	" Hugh T. Nelson.
" Lewis Wheat.....	Richmond, Henrico co.....	1880.....	Medical College of Virginia.....	" L. B. Edwards.
" G. T. Vaughan.....	Lewesville, Amherst county.....	1879.....	Univ. of Va. and Bellevue Hosp. Med. Col.....	" L. B. Edwards.

The Recording Secretary, Dr. Landon B. Edwards, presented the following as his report:

RICHMOND, VA., Sept. 12, 1882.

The usual exchanges have been received and deposited in the rooms of the Richmond Academy of Medicine, in accordance with a resolution adopted several years ago, subject to recall whenever the Medical Society of Virginia may so order.

Drs. Jesse Ewell and R. D. Leith, of Aldie, Loudoun county, Va., applied for certificates of Fellowship during the executive year now ended. Both gentlemen have paid their dues in full, and their fees for the certificates, and hence, by the Constitution, are entitled to such certificates, which were duly awarded.

In reply to the usual bills sent out by the Treasurer, Dr. J. E. Moyler, of Petersburg, Va., who paid his initiation fee and annual assessment for 1877-8, disclaims membership by letter received November 1st, 1881. It is recommended that his disclaimer be accepted, as the Society should not desire to retain unwilling members.

Several letters addressed more than once to some doctors of the State, who have heretofore recognized Fellowship and avowed interest in the Society, have been returned to the Recording Secretary "uncalled for." Of November 10th, 1881, a letter addressed to Dr. N. H. Burks, Blue Ridge Springs, Va., and one addressed to Dr. John M. Payne, Salem, Roanoke county, Va., have been so returned. It is recommended that both of these names be dropped from the Register of Fellows.

Dr. James A. Hill, of Culpeper county, requests to be "dropped" from the "Register of Fellows."

The following named Fellows have reported themselves as 70 years of age, and are, therefore, not subject to the usual annual assessments: Drs. G. Wm. Semple and John W. Owen.

Resignations of Fellowship of the following named members who have paid their dues in full to date, have been received since the last annual report of the Secretary: Drs. C. A. Bryce, of Richmond; James Dunn, of Petersburg; Wm. R. Winchester (who has moved to Macon, Ga.); Ernest Woolfolk (who has moved to Richmond, Ky.); E. G. Booth, of Wellville; R. U. Burgess, of Southampton county (who has discontinued practice of medicine); James W. Green, of Sussex county; J. W. Hines (who has moved to Le Mars, Iowa), and Cyrus McCormick, of Clarke county.

Dr. B. C. Harrison, of Wilcox Wharf, Va. (who owes \$8 to the Society), and Randall Holden, of Petersburg (who owes the Society \$6), have both retired from practice, and request that their resignations be accepted. Dr. D. C. Dickenson, of Museville, was incorrectly reported last year as having paid all his dues. He owes the Society \$4. His resignation was, therefore, accepted under an error of record.

Dr. H. D. Ashton, of Comorn, Va., paid up in full, and in due time requested his resignation of Fellowship to be presented at the last annual session, but the matter was accidentally overlooked. It is now recommended that his resignation be accepted as of date of October 10, 1881.

Dr. Ernest Woolfolk, formerly of Orange county, Va., but now of Richmond, Ky., moved from this State in 1879, and it was an oversight if he did not then offer his resignation. It is recommended that his resignation be accepted as dating from 1879. The other resignations are also recommended to be accepted, with the understanding that the Treasurer will do what he can to collect the amounts due from the gentlemen who owe the Society.

Dr. Orlando Fairfax, of Richmond, and Jas. A. Johnston, of Bergh's Mills, have died during the year.

Respectfully submitted,

LANDON B. EDWARDS,
Recording Secretary, &c.

The register of Fellows in attendance was then read, and all who had not registered were urged to do so.*

*The list includes *all* who registered as being in attendance during the several days of the session, but the Recording Secretary is confident that others were present who did not register their names in the book used for the purpose.—*Note by the Recording Secretary.*

NAMES.	POSTOFFICES.
Dr. O. H. Baird,	Waverly.
" Benj. Blackford,	Lynchburg.
" Geo. M. Bowen,	Jeffersonton.
" P. B. Bowen,	Stafford Store.
" Bedford Brown,	Alexandria.
" Jas. M. Caskie,	Berryville.
" J. E. Chancellor,	University of Virginia.
" Chas. C. Conway,	Rapid Ann.
" John G. Cooke,	Orleans.
" Wm. D. Cooper,	Morrisville.
" Wm. F. Cooper,	Morrisville.
" Landon B. Edwards,	Richmond.
" M. G. Ellzey,	Washington, D. C.
" Jesse Ewell, Jr.,	Aldie.
" Jesse Ewell, Sr.,	Hickory Grove.
" J. W. Ford,	Richland Mills.
" Henry Frost,	Marshall.
Hon. Fel., Dr. Saml ^r C. Gleaves,	Wytheville.
Dr. W. French Green,	Stafford C. H.
" Geo. S. Hamilton,	Rappahannock Station.
" Alex. Harris,	Jeffersonton.
" Robert I. Hicks,	Casanova.
" Fred. Horner (U. S. Navy),	Marshall.
" T. M. Hughes,	Amisville.
" M. A. Ish,	Neabsco Mills.
" S. K. Jackson,	Norfolk.
" M. L. James,	Richmond.
" Geo. B. Jennings,	Ruckersville.
Hon. Fel., Dr. Henry Latham,	Lynchburg.
Dr. John N. Mackenzie,	{ Baltimore (delegate Medical and Chirurgi- cal Faculty of Maryland).
" S. R. McClanahan,	Brandy Station.
" Wm. P. McGuire,	Winchester.
" John W. McIlhaney,	Warrenton.
" Hugh T. Nelson,	Charlottesville.
" R. P. Page,	Berryville.
" Geo. Wm. Pollard,	Aylet's Station.
" Wm. L. Robinson,	Danville.
" J. M. Scott, Jr.,	Raccoon Ford.
" John P. Slaughter,	The Plains.
" Thos. W. Smith,	Bethel.
" Wm. J. Strother,	Culpeper.
" Hugh M. Taylor,	Richmond.
" J. W. Taylor,	Hillsboro.
" A. V. M. Triplett,	Culpeper.
" John Ward,	Warrenton.
" John R. Wheat,	Richmond.
" Lewis Wheat,	Richmond.
" Joseph A. White,	Richmond.
" J. F. Winn,	Richmond.

On presentation by Dr. S. K. Jackson, it was

Resolved, That a committee of five be appointed to report at to-morrow morning's session resolutions expressive of the sense of this State Society upon the action of the New York State Medical Society, whereby they so changed the Code of Ethics as to allow its members to affiliate and consult with irregular practitioners of medicine.

The chair appointed Drs. S. K. Jackson, M. L. James, W. D. Cooper, O. H. Baird and M. A. Ish.

The Recording Secretary, by request of Dr. John S. Apperson, of Town House, Va., who was unavoidably prevented from attending this session, presented the report of the Necrological Committee, of which he is chairman. On motion, the report was ordered to be published in the *Transactions* of this session. [See page 516.]

Dr. Joseph A. White moved that hereafter no one be elected or appointed an officer of this Society who is not in attendance upon the session during which he is elected or appointed. After a lengthy discussion, on motion the question was laid on the table until to-morrow morning's session, with the understanding that a vote will then be taken on it without further discussion of the subject.

On motion by Hon. Fel., Dr. Henry Latham, a committee of thirteen Fellows, representing different sections of the State, was ordered to be appointed to nominate the elective officers of the Society for the ensuing term. The chair appointed Drs. Benj. Blackford (Dr. Latham requesting not to be placed on the committee), John F. Winn, Hugh M. Taylor, Geo. Wm. Pollard, Alex. Harris, Lewis Wheat, Geo. B. Jennings, O. H. Baird, John P. Slaughter and John Ward.

On motion, the meeting adjourned until 8 P. M.

FIRST DAY—NIGHT.

The meeting was called to order at 8 P. M. by First Vice President, Dr. Robinson.

In the absence of the President, and the want of time on his part to prepare an address as acting President, Dr. W. L. Robinson made a few almost *ex tempore* remarks. [See page 441.]

Under call for Reports on Advances in the different branches of medical science, Dr. Hugh M. Taylor presented the report on *Advances in Surgery*. After the report was read and discussed, it was ordered to be published. [See page 443.]

There being no other Reporter ready to-night, under call for volunteer papers, Dr. Hugh T. Nelson, of Charlottesville, reported a *Case of Urethral Stricture of Twenty Years' Standing Cured by the Vis Medicatrix Naturæ*. This paper was referred to the Committee on Publications, with instructions to publish.

On suggestion by Dr. M. L. James, of Richmond, Dr. Geo. B. Jennings, of Ruckersville, was requested to report a somewhat peculiar case; and after his report, he was requested to present it in manuscript for publication.

On motion, the Society adjourned until 10 A. M. to-morrow morning.

SECOND DAY—MORNING.

September 14th, 1882.

The Society was called to order at 10 A. M. by the First Vice-President, Dr. Wm. L. Robinson.

The minutes of yesterday's sessions were read by the Secretary, and approved.

According to motion carried yesterday afternoon, the resolution offered by Dr. J. A. White was called up for vote, to wit:

Resolved, That the officers of the Society be elected on the second day of each annual session; that they shall be chosen exclusively from among those attending the session, and that the "President-elect" shall make his appointments for the ensuing year before the session closes."

Dr. Wm. P. McGuire stated that he, besides several others, had arrived at the Springs since the resolution was offered yesterday and discussed; that he wanted to vote intelligently on the proposition, and therefore moved a reconsideration of the vote not allowing a discussion of the resolution at this time. Carried.

After a full discussion by several Fellows, on motion of Dr. Edwards, the resolution was laid on the table.

Upon call for papers, the Secretary announced that Prof. M. L. James, of Richmond, had prepared a paper on the *Curability of Consumption*. In response to a request from the chair, Dr. James then read his paper, which was followed by some discussion, entered into principally by Drs. S. K. Jackson, W. L. Robinson, and others.*

Dr. Benj. Blackford, acting for Honorary Fellow, Dr. Henry Latham, presented the report of the committee to nominate other officers than the President for the ensuing term, with the following nominations:†

*Dr. James wished to add other observations on the important subject of his paper (which was ordered to be published) to those presented during the session. Hence his manuscript was retained by himself. His engagements since the session have not allowed him to make such additions, and hence, for the present, at his own request, the publication of the paper is withheld.

Without this paper before the reader, the notes taken of the remarks by those who discussed the paper would be wanting in connection. Hence it has been deemed best to make no record of them for the present.

†For convenience of record, the name of the President elected by the Society is placed first on this list.—*Note by Recording Secretary.*

Dr. Wm. D. COOPER, Morrisville.....	President.
" MEADE C. KEMPER, Goshen	1st Vice-President.
" O. H. BAIRD, Waverly	2d "
" JOSEPH A. WHITE, Richmond.....	3d "
" JOHN S. APPERSON, Town House.....	4th "
" GEO. B. JENNINGS, Ruckersville.....	5th "
" JOHN W. DILLARD, Lynchburg	6th "
" LANDON B. EDWARDS, Richmond.....	Recording Secretary.
" HUGH M. TAYLOR, Richmond.....	Corresponding Sec'y.
" LANDON B. EDWARDS, Richmond.....	Treasurer.
" LÉWIS WHEAT, Richmond.....	} Committee on Nominations.
" J. PHILIP SLAUGHTER, The Plains.....	
" G. WM. POLLARD, Aylett.....	
" WM. D. HOOPER, Liberty.....	
" HUGH T. NELSON, Charlottesville.....	} Executive Committee.
" W. W. PARKER, Richmond.....	
Hon. Fellow, Dr. HARVEY BLACK, Blacksburg.....	
" Dr. F. D. CUNNINGHAM, Richmond.....	
" Dr. J. HERBERT CLAIBORNE, Petersburg.....	} Recording Secretary and Treasurer, <i>ex officio</i> .
" Dr. L. ASHTON, Falmouth.....	
Dr. E. T. ROBINSON, Richmond.....	} Committee on Publications.
" C. W. P. BROCK, Richmond.....	
" GEORGE ROSS, Richmond.....	
RECORDING SECRETARY AND TREASURER, <i>ex officio</i>	

On motion, Dr. S. K. Jackson was requested to cast the vote of the Society for the election of the Vice-Presidents and the officers afterwards named in the above enumeration, which he did.

The Chair then declared that each of the gentlemen nominated by the Committee for the positions opposite their names duly elected.

Under call for election of President, Drs. Wm. P. McGuire, J. E. Chancellor and W. D. Cooper were nominated. The first ballot resulted: Dr. McGuire, 15; Dr. Chancellor, 13; Dr. Cooper, 12. Dr. Chancellor asked that his name be withdrawn, and that his friends would support Dr. Cooper. On the second ballot, Dr. Wm. D. Cooper was elected President.

The presiding officer (Dr. Robinson) appointed Drs. Gleaves and Henry Latham to conduct the President-elect to the chair.

Dr. Cooper, on taking the chair, in response to the greetings of the Society, as appropriately worded by Dr. Robinson, expressed his appreciation of the honor conferred upon him, and promised to do all he could to promote the interests of the Society.

On motion, Dr. G. Wm. Semple, the late President, was elected an Honorary Fellow of the Society.

On further motion, Dr. Wm. L. Robinson, the presiding officer of this session until Dr. Cooper was seated, was also elected an Honorary Fellow.

The Committee appointed yesterday to report the sense of this Society.

in regard to the action of the New York Medical Society in regard to their Code of Ethics, presented through the Chairman, Dr. S. K. Jackson, the following resolutions, which were, on motion by Dr. Alex. Harris, almost unanimously adopted :

Resolved, That this Society views with concern and deep regret the action of so influential a body as that of the Medical Society of the State of New York, at its last annual meeting, whereby an attempt is made to break down the barriers so wisely erected by the Code of Ethics adopted by the American Medical Association and subscribed to by this Society, between the practitioners of the science of medicine and quacks and charlatans ; and desires to express in the most emphatic terms its disapproval and condemnation of that action.

Resolved, That we consider the Code of Ethics of the American Medical Association as the best guide we possess for the conduct of medical practitioners, and hereby re-affirm our adherence to it, and deprecate any change unless it shall be made by the American Medical Association, which body we regard as the representative of scientific medicine in this country.

Resolved, That we approve of the action of the American Medical Association, whereby it refused to receive the delegates of the New York State Medical Society.

On motion of Dr. M. L. James, the above resolutions were ordered to be communicated to the Secretary of the American Medical Association.

Hon. Fellow, Dr. Samuel C. Gleaves, after stating the Society should select the place of meeting for the next annual session, moved that Lynchburg be selected. Dr. J. E. Chancellor seconded the motion. Dr. Benj. Blackford, of Lynchburg, approved of the suggestion.

Dr. Joseph A. White moved that Rockbridge Alum Springs, of Rockbridge county, be selected. He stated that he was authorized by the Company to do so, through its President, Mr. J. Fred. Effinger. The invitation is *only* to members of the Society (and not their families), and no charge for hotel board will be made to *Fellows and delegates*. But the meeting must be during the first week of September, 1883.

The motion of Dr. White was seconded by several members ; and by a large majority the Rockbridge Alum Springs, Rockbridge county, was selected as the place for holding the next annual session, and the first Tuesday night of September, 1883, was selected as the time of meeting.*

Under call for reports from Reporters on Advances, Dr. Jos. A. White, of Richmond, presented the report on *Advances in Ophthalmology, Otology and Laryngology*. After the reading of the report, it was ordered to be published. [See page 456.]

After the discussions of this paper, the Society adjourned until 3½ P. M. of this day.

SECOND DAY—AFTERNOON.

The Society was called to order at 4 P. M. by the President.

Dr. Bedford Brown, under call for volunteer papers, read one entitled

*Since the adjournment of the late session, the Recording Secretary has received a letter from the President of the Springs Company, signed "J. Fred. Effinger, Pres.," dated Nov. 23d, 1882, re-affirming all that Dr. White stated.

Remarks on the Pathology and Treatment of the Pneumonia of Early Infancy, which, on motion by Dr. Benj. Blackford, was ordered to be published. [See page 501.]

The Recording Secretary read the announcement printed on page 438 of the printed *Transactions* of 1881, relating to the *Ex-Presidents' Prizes*. The offer is, in substance, that a prize of \$50 be awarded for the best essay on some *medical* subject, and a like prize for the best essay on some *surgical* subject—open only to Fellows of the Society. "The Society will first determine, by ballot, whether any essay is worthy of a prize; and afterwards, by ballot, which one is entitled to it." The subject for the *Medical Essay* was "*Alcohol—Its Uses and Effects as a Beverage and Medicine.*" The subject for the *Surgical Essay* was "*Recent Progress in Abdominal Surgery.*"

Dr. Edwards stated that the requirement was that each candidate should notify the Recording Secretary two weeks before the meeting of their intention to present papers. He had been informed of one applicant for the *surgical prize*, and of three for the *medical prize*.

With this statement, the Society determined, by general consent, to take up only the *surgical essay* this afternoon, reserving the reading of the *medical essays* as the special order of business to-night.

Under call for the "*Ex-Presidents' Prize Essay*" on the *surgical subject*, namely, "*Recent Progress in Abdominal Surgery*," Dr. Hugh M. Taylor was announced as the applicant, and, by request, came forward and read his paper. After its reading, by a unanimous ballot vote, the paper was deemed worthy of the prize of \$50, which was accordingly paid him by the Recording Secretary. [See page 467.]

Adjourned until 7½ o'clock to-night.

SECOND DAY—NIGHT.

The meeting was called to order at 7½ P. M. by the President, Dr. Cooper.

Dr. Benj. Blackford offered the following, which was carried:

Resolved, That hereafter the Committee appointed to nominate officers shall submit the nomination of the President together with the nominations of other elective officers of the Society.

Dr. Edwards stated that during this morning's session, the First Vice-President, Dr. Wm. L. Robinson, who presided over this session until the election of Dr. Cooper as President, had been elected an Honorary Fellow of the Society, as is the custom to do with all retiring Presidents, who have faithfully discharged their duty. But Dr. Robinson had himself called Dr. Edwards' attention to the illegality of this action, since only *Ex-Presidents* are entitled to this honor. At Dr. Robinson's request, therefore, he

moved a reconsideration of the vote by which Dr. Robinson was unanimously elected an Honorary Fellow. Carried.

Dr. Edwards then withdrew the nomination of Dr. Robinson as an Honorary Fellow—stating that he did so only because of the illegality of his nomination this morning, of which he was reminded by Dr. Robinson himself.

The President stated that it would now be in order to elect the gentleman to deliver, at the next annual session, the "Annual Address to the Public and Profession."

Drs. Wm. L. Robinson and E. A. Chancellor were nominated. Dr. Robinson requested that his name be withdrawn, which was done. Dr. Chancellor was then unanimously elected to make the address.

The Recording Secretary announced that there were three applicants for Ex-Presidents' Prize for the Medical Essay on the subject, "*Alcohol—Its Uses and Effects as a Beverage and Medicine*," namely, Drs. John F. Winn, Fred. Horner and M. G. Ellzey.

Dr. Edwards moved that the essays be read in the order named, and as they were announced to him, and that, in obedience to the suggestion of the Ex-Presidents, after the reading of the three essays, the vote be first taken, by ballot, whether or not either of the three was deserving the prize; and if that ballot was favorable, then another ballot or more declaring which one was worthy of the prize be taken. Carried.

Drs. Winn, Horner and Ellzey then read their papers in the order named.

After the reading of the papers, according to the ruling, as just stated, the first ballot was on the question whether or not any of the three essays was entitled to the prize. That ballot resulted 31 ayes, 3 nays—several gentlemen stating that as they had not heard all of the essays, they would decline to vote.

The first ballot as to the essay worthy of the prize resulted as follows: Dr. Winn, 15; Dr. Ellzey, 14; Dr. Horner, 2. On the second ballot (Dr. Horner's name being dropped, according to previous agreement that the one receiving the lowest number of votes should be dropped), the ballot resulted: Dr. Ellzey, 16; Dr. Winn, 15.

The prize of \$50 was accordingly given to Dr. Ellzey by the Recording Secretary, into whose hands the sum had been committed for delivery.

The meeting then adjourned until 10 o'clock to-morrow morning.

THIRD DAY—MORNING.

The meeting was called to order at 10 A. M. by the President—the Recording Secretary being in place, who, at his request, was assisted in keeping the minutes by Dr. W. F. Cooper.

On motion of Dr. Geo. Wm. Pollard, the reading of the minutes of yesterday was suspended.

The Treasurer presented the following statement as his report, which he deferred presenting until this moment in order that he might collect all the dues possible to date :

Received from Initiation Fees and Annual Assessments from date of last report, October 12th, 1881.....		\$720.00
Balance due Recording Secretary, October 12th, 1881, as approved by Auditing Committee at that time.....	\$ 84.79	
All other expenses during the fiscal year ended Sept. 15th, 1882, as per vouchers and memoranda in hand.....	628.80	
Total expenses and receipts.....	\$713.59	\$720.00
Deduct expenses		713.59
Balance on hand.....		<u>\$ 6.49</u>

Thus the Treasurer has the pleasure of again reporting the Society out of debt to date.

Respectfully submitted,

LONDON B. EDWARDS,
Treasurer.

Dr. Edwards moved that before any action be taken on his report it be referred to a committee of three Fellows, for the purpose of auditing the accounts, etc. Carried.

The President appointed Drs. J. P. Slaughter, Geo. S. Hamilton and Henry Frost, with the request that the committee retire at once and report as soon as practicable.

When the committee had retired, Dr. L. B. Edwards, after some explanations as to the need of such a measure, offered the following resolutions, which were adopted :

Resolved, That a committee of three Fellows be appointed by the President to collect and arrange in proper form all the by-laws and resolutions relating to the permanent conduct of the Society which have been adopted during the different sessions of the Society from its organization in 1870, and all changes in the Constitution, if any, that have been made, with authority to suggest such modifications, if any are deemed necessary for the better government of the Society, as the committee may deem proper.

Resolved, That if the said committee sees any necessity for suggesting any change of the Constitution, such fact is to be stated in the usual annual circular of the Executive Committee, which is issued a month before the regular meeting; and such said publication is to have the effect of complying with the requirement of *Section 1*,

Article xi, of the existing Constitution of the Society, viz. : "This Constitution may be amended at any regular meeting by four-fifths of the votes taken on such proposition ; or if notice of the amendment asked be advertised through the Executive Committee one month previous to a vote on it, a two-thirds vote in its favor may adopt it."

The President, after stating that such a committee should reside in the same community, so that there may be frequent conferences, appointed Drs. L. B. Edwards, M. L. James and Hugh M. Taylor.

The President stated that he would name his appointments as Reporters in Advances in the different branches of medical science, as also appointments of delegates to the different Societies, through the forthcoming volume of *Transactions*.

Call was then made for discussion on the selected subject—*Abnormal Menstruation*—but upon motion of Dr. L. B. Edwards, as the Auditing Committee was out, a recess was taken until that committee might complete its work—the meeting to be called to order on ten minutes' notification by the President to the Recording Secretary.

In about a half an hour the meeting was called to order by the President.

Upon call for the report of the committee to audit the books and accounts of the Treasurer, Dr. J. P. Slaughter presented the following :

"The committee appointed to examine the Treasurer's books and vouchers respectfully report that they have performed the duty assigned to them, and find the accounts correct.

They find a balance of six dollars and forty-one cents (\$6.41) to the credit of the Society.

Respectfully submitted,

J. P. SLAUGHTER, M. D., Chairman,
GEO. S. HAMILTON, M. D.,
HENRY FROST, M. D."

The report was received and adopted.

The President announced as the next order of business, *the discussion of the regularly chosen subject—Abnormal Menstruation*.

Dr. Saml. K. Jackson, of Norfolk, was called on. He stated that he had prepared a report of some cases ; but did not know exactly whether or not the report would be acceptable under this heading. A synoptical statement satisfied the Society that his reports were *apropos*. He was therefore requested to present his paper, which he did, after the reading of which it was directed, by vote, to be published in the *Transactions*. [See page 492, paper titled "*Some Cases of Hystero-Epilepsy or Hystero-Catalepsy*."]]

Dr. J. Edgar Chancellor then read a paper on *Abnormal Menstruation*, which was ordered to be published in the *Transactions*. [See page 489.]

Some general remarks were made on this paper by Drs. Jackson, Robinson, Edwards, Nelson, Pollard, Bedford Brown (who spoke especially of the value of the lacto-phosphate of lime, in one drachm doses, three times a day.)

DIPHTHERIA

Was selected as the subject for general discussion at the next annual session.

On motion by Dr. Hugh T. Nelson, it was

Resolved, That a vote of thanks be tendered the Committee of Arrangements for this session—especially to John R. Spillman, Esq.—for the complete and comfortable arrangements for the comfort of the Fellows of the Society during its present session; also to Messrs. Tenney & Co., proprietors of the Fauquier White Sulphur Springs Hotel, for their polite attention to the wishes of the members in all that could contribute to their pleasure; also to the lines of public travel that have allowed reduced rates for this session.

There being no other business, the Society adjourned, after some appropriate remarks from the President, to meet during the first week of September, 1883, at Rockbridge Alum Springs, Va.

APPOINTMENTS.

Officers for Term 1882-3: See page 529.

Place of Meeting 1883: Rockbridge Alum Springs, Rockbridge Co., Va.

Time of Meeting: During the first week of September, 1883—the exact day and hour to be hereafter announced by circular from the Executive Committee.

To Deliver Annual Address to Public and Profession: Dr. J. Edgar Chancellor, Charlottesville, Va.

Chairman of Committees to Report on Advances in the Several Departments of Medical Science:

- (1) *Anatomy and Physiology:* Dr. John R. Wheat, Richmond, Va.
- (2) *Chemistry, Pharmacy, Materia Medica and Therapeutics:* Hon. Fellow, Dr. A. M. Fauntleroy, Staunton, Va.
- (3) *Obstetrics and Diseases of Women and Children:* Dr. M. G. Ellzey, Washington, D. C.
- (4) *Surgery:* Dr. Wm. P. McGuire, Winchester, Va.
- (5) *Practice of Medicine:* Dr. Saml. K. Jackson, Norfolk, Va.
- (6) *Hygiene and Public Health:* Dr. Wm. F. Barr, Abingdon, Va.
- (7) *Ophthalmology, Laryngology and Otology:* Dr. Charles M. Shields, Richmond, Va.

Necrological Committee: Drs. John S. Apperson, Town House; S. B. Morrison, Brownsburg, and Wm. J. Moore, Norfolk.

Delegates to American Medical Association: All of the Ex-Presidents, and any other Fellows who signify their intention to attend the session in Cleveland, Ohio, May, 1883, so that the total number of delegates shall not exceed one for every ten Fellows of the Society. Appointments will be made by the President.

Delegates to the various State Medical Societies will be appointed by the President, Dr. Wm. D. Cooper, Morrisville, Fauquier Co., Va. Those desiring to attend any of these State Societies as delegates should at once notify him.

APPLICANTS FOR FELLOWSHIP.

NOTE BY RECORDING SECRETARY.

Those who design uniting themselves with the Medical Society of Virginia, should observe the following instructions in sending in their applications to the Recording Secretary. Write plainly—

Name in full.

Postoffice and County.

Date and College of Graduation.

Recommended by (some Fellow of the Society).

Each application for Fellowship must be accompanied by the Initiation fee (two dollars), which fee must be in hand before the application can be considered by the Committee on Nominations. (See page 326, *Transactions* 1877.) If the application is accepted by the Committee on Nominations, the fact is promptly announced to the Society, and the vote is immediately taken. If the party is elected, he at once shares all the privileges of Fellowship. Should he not be elected, the Initiation fee is returned.

Those who apply for Fellowship must be recognized as Regular Physicians, in good standing in the community in which they reside.

ALPHABETICAL REGISTER OF FELLOWS

On adjournment of the Thirteenth Annual Session at Fauquier White Sulphur Springs, Fauquier Co., Va., September 15th, 1882.

HONORARY FELLOWS.

NON-RESIDENTS.

NAMES.	POSTOFFICES.	SESS. ELECTED.	NAMES.	POSTOFFICE.	SESS. ELECTED.
Dr. Robert Battey	Rome, Ga.	1878	Dr. Alban S. Payne	Atlanta, Ga.	1878
" Joseph Jones	New Orleans, La.	1878	" Lewis A. Sayre	New York, N. Y.	1878
" John T. Metcalf	New York, New York	1878	" J. Marion Sims	New York, N. Y.	1878

RESIDENT HONORARY FELLOWS.

NAMES.	POSTOFFICES.	SESS. ELECTED.	REMARKS.
Dr. Harvey Black	Blacksburg, Va.	1873	Joined Society 1872 (3d President.)
" James L. Cabell	University of Virginia	1877	1871 (7th President.)
" John H. Claiborne	Petersburg, Va.	1878	1870 (8th President.)
" F. D. Cunningham	Richmond, Va.	1876	1870 (6th President.)
" A. M. Fauntleroy	Staunton, Va.	1872	1871 (2d President.)
" Saml. C. Gleaves	Wytheville, Va.	1875	1872 (4th President.)
" Levin S. Joynes*	Richmond, Va.	1879	1870 (9th President.)
" Henry Latham	Lynchburg, Va.	1880	1870 (10th President.)
" Hunter McGuire	Richmond, Va.	1881	1870 (11th President.)
" Robert S. Payne	Lynchburg, Va.	1871	1870 (1st President.)
" G. Wm. Semple	Hampton, Va.	1882	1871 (12th President.)
" A. G. Tebault	London Bridge, Va.	1874	1871 (4th President.)

Dr. Joynes died 1881.

ACTIVE FELLOWS.

NAMES.	POSTOFFICES.	AMES.	POSTOFFICES.	SESS. ELECTED.
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Dr. Wm. F. Adams	Hurt's Store, Pittsylvania Co.	1871	Dr J. T. Bontelle.....	Hampton, Elizabeth City Co.....	1875
" Athus M. Adkins.....	Littleton, Sussex Co.....	1872	" C. S. Bowcock.....	Keswick, Albemarle Co.....	1875
" Sylvester Albert.....	Belfast Mills, Russell Co.....	1874	" George M. Bowen.....	Jefferson, Culpeper Co.....	1882
" James A. Alexander.....	Broadway, Rockingham Co.....	1871	" P. B. Bowen.....	Stafford Store, Stafford Co.....	1880
" P. Edward Andersen.....	Rodophil, Amelia Co.....	1876	" Richard C. Bowles.....	Chapel Hill, Fluvanna Co.....	1872
" John S. Apperson.....	Town House, Smythe Co.....	1871	" T. M. Bowyer.....	Liberty, Bedford Co.....	1872
" Jacob W. Arnold.....	Natural Bridge, Rockbridge Co.....	1877	" Wm. H. Bramblett.....	Newbern, Pulaski Co.....	1871
" L. Ashton.....	Falmouth, Stafford Co.....	1874	" Chas. S. Brittan.....	Richmond, Henrico Co.....	1875
" O. H. Baird.....	Waverly, Sussex Co.....	1878	" Wm. L. Broadus.....	Newtown, King and Queen Co.....	1872
" Phillip B. Baker.....	Suffolk, Nansemond Co.....	1873	" C. W. P. Brock.....	Richmond, Henrico Co.....	1871
" Sidney B. Barham.....	Spotsville, Surry Co.....	1878	" Bedford Brown.....	Alexandria, Alexandria Co.....	1879
" Wm. B. Barham.....	Newsom's, Southampton Co.....	1877	" S. P. Brown.....	Cartersville, Cumberland Co.....	1877
" Randolph Barksdale.....	Richmond, Henrico Co.....	1877	" Jas. F. Bryant.....	Franklin, Southampton Co.....	1872
" R. V. Barksdale.....	Danville, Pittsylvania Co.....	1880	" Jas. W. Bryant, Jr.....	Petersburg, Dinwiddie Co.....	1877
" Wm. F. Barr.....	Abingdon, Washington Co.....	1871	" James S. Buchanan.....	Craigsville, Augusta Co.....	1878
" Robert L. Barret.....	Louisa C. H.....	1871	" H. F. Butt.....	Portsmouth, Norfolk Co.....	1873
" Darwin Bashaw.....	Craigsville, Augusta Co.....	1871	Dr. J. Grattan Cabell.....	Richmond, Henrico Co.....	1870
" John B. Baskerville.....	Big Lick, Ranoke Co.....	1871	" John R. Cabell.....	Calland's, Pittsylvania Co.....	1880
" D. E. Bass.....	Lynchburg, Campbell Co.....	1871	" Robert G. Cabell, Jr.....	Richmond, Henrico Co.....	1878
" Wm. L. Baylor.....	Petersburg, Dinwiddie Co.....	1877	" Wm. C. Cabell.....	Calland's, Pittsylvania Co.....	1880
" James Beale.....	Petersburg, Henrico Co.....	1875	" S. W. Carmichael.....	Fredericksburg, Spotsylvania Co.....	1875
" T. Stanley Beckwith.....	Petersburg, Dinwiddie Co.....	1877	" John D. Carnahan.....	Ogden City, Utah.....	1874
" R. Alexander Belfield.....	Farmer's Fork, Richmond Co.....	1879	" George W. Carrington.....	Campbell C. H.....	1870
" H. J. Belt.....	Whitwell, Pittsylvania Co.....	1880	" Thomas Carroll.....	Orange C. H.....	1878
" D. B. Benson.....	Etna Mills, King William Co.....	1881	" Geo. W. Carter.....	Markham, Fauquier Co.....	1882
" E. F. Birchhead.....	Piuvanna, Albemarle Co.....	1876	" M. B. Carter.....	Richmond, Henrico Co.....	1874
" Kent Black.....	Blacksburg, Montgomery Co.....	1878	" Wm. C. Carter.....	Danville, Pittsylvania Co.....	1880
" Benj. Blackford.....	Lynchburg, Campbell Co.....	1870	" James M. Caskie.....	Berryville, Clarke Co.....	1882
" Chas. G. Bohanon.....	Matthews C. H.....	1878	" C. A. Cassidy.....	Ruckersville, Greene Co.....	1879
" George A. Boone.....	Troutville, Botetourt Co.....	1876	" G. T. Cauthorn.....	Liberty, Bedford Co.....	1872

Dr. J. T. Bontelle.....	Hampton, Elizabeth City Co.....	1875
" C. S. Bowcock.....	Keswick, Albemarle Co.....	1875
" George M. Bowen.....	Jefferson, Culpeper Co.....	1882
" P. B. Bowen.....	Stafford Store, Stafford Co.....	1880
" Richard C. Bowles.....	Chapel Hill, Fluvanna Co.....	1872
" T. M. Bowyer.....	Liberty, Bedford Co.....	1872
" Wm. H. Bramblett.....	Newbern, Pulaski Co.....	1871
" Chas. S. Brittan.....	Richmond, Henrico Co.....	1875
" Wm. L. Broadus.....	Newtown, King and Queen Co.....	1872
" C. W. P. Brock.....	Richmond, Henrico Co.....	1871
" Bedford Brown.....	Alexandria, Alexandria Co.....	1879
" S. P. Brown.....	Cartersville, Cumberland Co.....	1877
" Jas. F. Bryant.....	Franklin, Southampton Co.....	1872
" Jas. W. Bryant, Jr.....	Petersburg, Dinwiddie Co.....	1877
" James S. Buchanan.....	Craigsville, Augusta Co.....	1878
" H. F. Butt.....	Portsmouth, Norfolk Co.....	1873
Dr. J. Grattan Cabell.....	Richmond, Henrico Co.....	1870
" John R. Cabell.....	Calland's, Pittsylvania Co.....	1880
" Robert G. Cabell, Jr.....	Richmond, Henrico Co.....	1878
" Wm. C. Cabell.....	Calland's, Pittsylvania Co.....	1880
" S. W. Carmichael.....	Fredericksburg, Spotsylvania Co.....	1875
" John D. Carnahan.....	Ogden City, Utah.....	1874
" George W. Carrington.....	Campbell C. H.....	1870
" Thomas Carroll.....	Orange C. H.....	1878
" Geo. W. Carter.....	Markham, Fauquier Co.....	1882
" M. B. Carter.....	Richmond, Henrico Co.....	1874
" Wm. C. Carter.....	Danville, Pittsylvania Co.....	1880
" James M. Caskie.....	Berryville, Clarke Co.....	1882
" C. A. Cassidy.....	Ruckersville, Greene Co.....	1879
" G. T. Cauthorn.....	Liberty, Bedford Co.....	1872

ALPHABETICAL REGISTER OF FELLOWS—CONTINUED.

ACTIVE FELLOWS.

NAMES.	POSTOFFICES.	SESS. ELECTED.	NAMES.	POSTOFFICES.	SESS. ELECTED.
Dr. J. E. Chancellor.....	Charlottesville, Albemarle Co.....	1871	Dr. Wm. C. Dabney.....	Charlottesville, Albemarle Co.....	1873
" Wm. J. Cheatham.....	Amelia C. H.....	1870	" P. S. Dance.....	Powhatan C. H.....	1875
" Jas. W. Claiborne.....	Petersburg, Dinwiddie Co.....	1871	" Wm. H. Daughtry.....	Newsom's, Southampton Co.....	1871
" A. J. Clark.....	Lynchburg, Campbell Co.....	1880	" John Staige Davis.....	University of Virginia, Albemarle Co.....	1871
" A. Trent Clark.....	South Roston, Halifax Co.....	1870	" H. Wythe Davis.....	Richmond, Henrico Co.....	1875
" H. M. Clarkson.....	Haymarket, Prince William Co.....	1879	" Samuel Davis.....	Wolf Glade, Carroll Co.....	1875
" John Clopton.....	Williamsburg, James City Co.....	1873	" James C. Deaton.....	Richmond, Henrico Co.....	1875
" S. Coates.....	Richmond, Henrico Co.....	1874	" J. E. L. Delk.....	Zuni Station, Isle of Wight Co.....	1874
" Wm. H. Coggeshall.....	Richmond, Henrico Co.....	1882	" Benjamin Dennis.....	Matoax, Amelia Co.....	1880
" W. W. Coggin.....	Waverly, Sussex Co.....	1875	" John S. Deyler.....	Salem, Roanoke Co.....	1873
" H. W. Cole.....	Danville, Putnam Co.....	1871	" Reuben B. Dice.....	Charlottesville, Albemarle Co.....	1873
" Robert T. Coleman.....	Richmond, Henrico Co.....	1870	" W. W. Dickie.....	Richmond, Henrico Co.....	1875
" Wm. J. Coleman.....	Thornhill, Orange Co.....	1879	" Smelt W. Dickinson.....	Marion, Smythe Co.....	1872
" Chas. C. Conway.....	Rapid Ann, Culpeper Co.....	1874	" John W. Dillard.....	Lynchburg, Campbell Co.....	1876
" Wm. B. Conway.....	Blacksburg, Montgomery Co.....	1876	" Thos. H. B. Dillard.....	Salem, Roanoke Co.....	1873
" John G. Cooke.....	Orleans, Fauquier Co.....	1882	" Cyrus Doggett.....	Fincastle, Botetourt Co.....	1874
" Wm. D. Cooper.....	Morrisville, Fauquier Co.....	1879	" J. Lewis Dorset.....	Dorset, Powhatan Co.....	1875
" Wm. F. Cooper.....	Morrisville, Fauquier Co.....	1879	" C. Watson Doyle.....	Dickinson's, Franklin Co.....	1877
" A. S. Cousins.....	Matoaca, Chesterfield Co.....	1878	" E. A. Drewry.....	Richmond, Henrico Co.....	1870
" Howard L. Cowan.....	Richmond, Henrico Co.....	1877	" J. Jacob Duck.....	Windsor, Isle of Wight Co.....	1873
" Robert H. Cowan.....	Richmond, Henrico Co.....	1877	" C. C. Duffy.....	Norfolk, Norfolk Co.....	1881
" R. H. Cox.....	West Point, King William Co.....	1870	" Wm. H. Dulaney.....	Lynchburg, Campbell Co.....	1874
" Edward A. Craighill.....	Lynchburg, Campbell Co.....	1879	" B. F. Dunn.....	Gordonsville, Orange Co.....	1871
" James F. Crane.....	Richmond, Henrico Co.....	1875	" Wm. L. Dunn.....	Glade Spring, Washington Co.....	1874
" O. A. Creshaw.....	Richmond, Henrico Co.....	1873	Dr. Henry A. Edmondson.....	Christiansburg, Montgomery Co.....	1879
" Henry S. Crockett.....	Rural Retreat, Wythe Co.....	1874	" Landon B. Edwards.....	Richmond, Henrico Co.....	1870
" Walter A. Crow.....	Glade Springs, Washington Co.....	1881	" Jos. D. Eggleston.....	Worsham, Prince Edward Co.....	1881
" Chas. R. Cullen.....	Richmond, Henrico Co.....	1877	" Wm. G. Eggleston.....	Hamden Sidney Col., Pr. Edw'd Co.....	1882
" J. S. Dorsey Cullen.....	Richmond, Henrico Co.....	1870	" Wm. M. Eggleston.....	Glenora, Washington Co.....	1875
" Isaac Curd.....	Richmond, Henrico Co.....	1877			

" R. T. Ellett.....	Blacksburg, Montgomery Co.....	1872
" M. G. Ellzey.....	Washington, D. C.....	1876
" Algernon S. Epes.....	Nottoway C. H.....	1873
" J. M. Estill.....	Tazewell C. H.....	1874
" Thomas R. Evans.....	Oak Hill, Fayette Co., W. Va.....	1877
" Jesse Ewell, Jr.....	Albie, Loudoun Co.....	1879
" Jesse Ewell, Sr.....	Hickory Grove, Prince Wm. Co.....	1880
Dr. Albert Fairfax		
" Conrad Hill Mines, McKee P. O., N. C.....		1871
" Jerry Farmer.....	Dublin, Pulaski Co.....	1874
" John W. Farmer.....	Central, Montgomery Co.....	1873
" Wm. Farmer.....	Abingdon, Washington Co.....	1874
" Jas. E. Fergusson.....	Malmalson, Pittsylvania Co.....	1880
" Hume Field.....	San Marino, Dinwiddie Co.....	1872
" O. B. Finney.....	Onancock, Accomac Co.....	1879
" Wm. F. Fisher.....	Spout Springs, Appomattox Co.....	1876
" A. W. Fontaine.....	New Canton, Buckingham Co.....	1877
" J. W. Ford.....	Richland Mills, Stafford Co.....	1881
" Henry Frost.....	Marshall, Fauquier Co.....	1882
Dr. Joseph A. Gale		
" Salem, Roanoke Co.....		1871
" James D. Galt.....	Norfolk, Norfolk Co.....	1871
" C. L. Garnett.....	Newport News, Warwick Co.....	1881
" Jennifer Garnett.....	Richmond, Henrico Co.....	1870
" Wm. K. Gatewood.....	Jameica, Middlesex Co.....	1875
" Edward C. Gee.....	Lockleven, Lunenburg Co.....	1882
" A. Speirs George.....	Richmond, Henrico Co.....	1877
" Franklin George.....	Danville, Pittsylvania Co.....	1880
" C. H. Getzendenner.....	Staunton, Augusta Co.....	1882
" J. St. Pierre Gibson.....	Staunton, Augusta Co.....	1872
" Wm. Gibson.....	Alexandria, Alexandria Co.....	1879
" J. R. Gildersleeve.....	Tazewell C. H.....	1874
" J. R. Godwin.....	Pincastle, Botetourt Co.....	1873
" W. H. L. Goodman.....	Franklin, Southampton Co.....	1879
" J. C. Gordon.....	Ivy Depot, Albemarle Co.....	1876
" Thomas W. Gordon.....	Richmond, Henrico Co.....	1882
" H. M. Grant.....	Abingdon, Washington Co.....	1870

*Died November, 1882.

Dr. Robah F. Gray.....	Winston, N. C.....	1879
" Wm. B. Gray.....	Richmond, Henrico Co.....	1871
" P. K. Graybill.....	Amsterdam, Botetourt Co.....	1874
" James C. Green.....	Danville, Pittsylvania Co.....	1872
" W. French Green.....	Snafford C. H.....	1882
" Charles C. Greer.....	Rocky Mount, Franklin Co.....	1880
" T. B. Greer.....	Rocky Mount, Franklin Co.....	1876
" Charles B. Griffin.....	Salem, Roanoke Co.....	1873
" John C. Griffin.....	Zuni Station, Isle of Wight Co.....	1873
" E. H. Grigg.....	Pamplins City, Appomattox Co.....	1881
" Phil. Doddridge Grove.....	Sinking Creek, Craig Co.....	1876
" John S. Guyer.....	Middletown, Frederick Co.....	1875
Dr. Barksdale Hales.....		
" News Ferry, Halifax Co.....		1879
" Lucien Hall.....	Greenwood Depot, Albemarle Co.....	1876
" Thomas A. Hall.....	Newville, Prince George Co.....	1877
" Jacob G. Haller.....	Wytheville, Wythe Co.....	1873
" George S. Hamilton.....	Rappahannock Station, Fauquier Co.....	1882
" Robert S. Hamilton.....	Staunton, Augusta Co.....	1870
" Phil. S. Hancock.....	Midlothian, Chesterfield Co.....	1877
" J. M. Hanger.....	Staunton, Augusta Co.....	1871
" Alex. Harris.....	Jeffersonston, Culpeper Co.....	1882
" George W. Harris.....	Richmond, Henrico Co.....	1874
" B. C. Harrison.....	Wilcox Wharf, Charles City Co.....	1875
" Geo. Byrd Harrison.....	Washington, D. C.....	1879
" James F. Harrison.....	University of Virginia, Albemarle Co.....	1871
" J. P. Harrison.....	Richmond, Henrico Co.....	1880
" Angus R. B. Harisook.....	Midway Mills, Nelson Co.....	1878
" Lewis E. Harvie, Jr.....	Danville, Pittsylvania Co.....	1870
" W. E. Harwood.....	Petersburg, Dinwiddie Co.....	1877
" Wm. F. Henderson.....	Blacksburg, Montgomery Co.....	1877
" Caspar C. Henkel.....	New Market, Shenandoah Co.....	1879
" Z. B. Herndon.....	Richmond, Henrico Co.....	1870
" R. N. Hewitt.....	Evington, Campbell Co.....	1871
" R. I. Hicks.....	Casanova, Fauquier Co.....	1882
" Wm. Otho Hill*.....	Harrisonburg, Rockingham Co.....	1870
" John A. Hillsman.....	Lodore, Amelia Co.....	1873

ACTIVE FELLOWS—CONTINUED.

NAMES.	POSTOFFICES.	SESS. ELECTED.	NAMES.	POSTOFFICES.	SESS. ELECTED.
Dr. Samuel A. Hinton.....	Petersburg, Dinwiddie Co.....	1882	Dr. Meade C. Kemper.....	Goshen, Rockbridge Co.....	1878
" Benj. Hanev Hite.....	Holly Dale, Lunenburg Co.....	1872	" Henry D. Kerfoot.....	Berryville, Clarke Co.....	1872
" S. T. Holliday.....	Winchester, Frederick Co.....	1872	" Thomas D. Kernan.....	Lebanon, Russell Co.....	1871
" Wm. D. Hooper.....	Liberty, Bedford Co.....	1871	" P. H. Killey.....	Mouth of East River, Giles Co.....	1874
" F. S. Hope.....	Portsmouth, Norfolk Co.....	1880	" John King.....	Hampton, Elizabeth City Co.....	1871
" Jesse P. Hope.....	Hampton, Elizabeth City Co.....	1871	" A. Z. Koier.....	Big Lick, Roanoke Co.....	1878
" B. F. Hopkins.....	Warm Springs, Bath Co.....	1872	" Cooper D. Kunkle.....	Parnassus, Augusta Co.....	1878
" Frederick Horner.....	Marshall, Fauquier Co.....	1876			
" Thomas H. Howard.....	Floyd C. H.....	1874	Dr. Daniel A. Langhorne.....	Lynchburg, Campbell Co.....	1870
" Robert D. Huffard.....	Chatham Hill, Smythe Co.....	1874	" D. W. Lassiter.....	Petersburg, Dinwiddie Co.....	1870
" Thomas M. Hughes.....	Amisville, Rappahannock Co.....	1882	" H. Grey Latham.....	Lynchburg, Campbell Co.....	1871
" H. T. Hunter.....	Norfolk, Norfolk Co.....	1872	" John W. Lawson.....	Smithfield, Isle of Wight Co.....	1871
			" Wm. B. Leary.....	Potomac, Prince William Co.....	1882
Dr. R. W. I'Anson.....	Bacon's Castle, Surry Co.....	1874	" W. Augustus Lee.....	Richmond, Henrico Co.....	1870
" Benj. F. Iden.....	Manassas, King William Co.....	1872	" H. Gilbert Leigh.....	Petersburg, Dinwiddie Co.....	1871
" S. L. Ingram.....	Manchester, Chesterfield Co.....	1878	" R. D. Leith.....	Aldie, Loudoun Co.....	1881
" Paulus A. Irving.....	Danville, Pittsylvania Co.....	1880	" H. H. Levy.....	Richmond, Henrico Co.....	1873
" Milton A. Ish.....	Neabsco Mills, Prince William Co.....	1874	" John Lewis.....	Charlottesville, Albemarle Co.....	1872
			" M. M. Lewis.....	Alexandria, Alexandria Co.....	1871
Dr. Samuel K. Jackson.....	Norfolk, Norfolk Co.....	1873	" Robert S. Lewis.....	Culpeper, Culpeper Co.....	1882
" M. L. James.....	Richmond, Henrico Co.....	1870	" J. Ed. Lincoln.....	Lacy Springs, Rockingham Co.....	1882
" R. W. Jeffery.....	Petersburg, Dinwiddie Co.....	1877	" Wm S. Love.....	Winchester, Frederick Co.....	1877
" Geo. B. Jennings.....	Rockersville, Greene Co.....	1874	" Geo. S. Luck.....	Big Lick, Roanoke Co.....	1873
" Geo. Ben. Johnston.....	Richmond, Henrico Co.....	1876	" Wm. J. Luck.....	Middleburg, Loudoun Co.....	1877
" Daniel P. Jones.....	Thaxtons, Bedford Co.....	1872			
" James H. Jones.....	Edmunds Store, Brunswick Co.....	1871	Dr. J. W. Mallet.....	University of Virginia, Albemarle Co.....	1873
" J. Randolph Jones.....	Hicksford, Greenville Co.....	1872	" Otis F. Munson.....	Richmond, Henrico Co.....	1870
" Wm. J. Jones.....	Waynesboro, Augusta Co.....	1871	" H. M. D. Martin.....	Fredericksburg, Spotsylvania Co.....	1878
" J. C. Jordan.....	Richmond, Henrico Co.....	1879	" Rawley W. Martin.....	Chatham, Pittsylvania Co.....	1873
			" Thomas P. Mathews.....	Manchester, Chesterfield Co.....	1878
Dr. S. S. Keeling.....	Norfolk, Norfolk Co.....	1872	" G. W. O. Maupin, Jr.....	Portsmouth, Norfolk Co.....	1873
" Wm. E. Kemble.....	Churchland, Norfolk Co.....	1873	" G. W. O. Maupin, Sr.....	Portsmouth, Norfolk Co.....	1873

Dr. John F. May.....Sussex Co.....1882
 " P. Pendleton May.....Trevilian, Louisa Co.....1871
 " James B. McCaw.....Richmond, Henrico Co.....1870
 " James H. McCaw.....Richmond, Henrico Co.....1878
 " Wm. S. McClesney.....Staunton, Augusta Co.....1870
 " S. R. McClanahan.....Brandy Station, Culpeper Co.....1882
 " Geo. B. McCorkle.....Covington, Alleghany Co.....1881
 " G. McDonald.....Union, Monroe Co., W. Va.....1870
 " Wm. P. McGuire.....Winchester, Frederick Co.....1873
 " John W. McIlhenny.....Warrenton, Fauquier Co.....1875
 " Donald McPhail.....Talcott, Charlotte Co.....1878
 " Henry B. Melvin.....Halifax C. H.....1880
 " Wm. F. Mercer.....Richmond, Henrico Co.....1882
 " Thomas S. Michaels.....Richmond, Henrico Co.....1870
 " Jacob Michaux.....Richmond, Henrico Co.....1878
 " H. G. Miller.....Millboro, Bath Co.....1877
 " Charles S. Mills.....Richmond, Henrico Co.....1882
 " James D. Moncure.....Richmond, Henrico Co.....1870
 " John H. Moore.....Waterville, Loudoun Co.....1881
 " R. E. Moore.....Wytheville, Wythe Co.....1872
 " Thomas J. Moore.....Richmond, Henrico Co.....1882
 " Wm. J. Moore.....Norfolk, Norfolk Co.....1871
 " Beverly P. Morris.....Amherst C. H.....1882
 " Wm. S. Morris.....Lynchburg, Campbell Co.....1875
 " Saml. B. Morrison.....Brownsburg, Rockbridge Co.....1873
 " John P. Motley.....Danville, Pittsylvania Co.....1880
 " A. R. Mott, Jr.....Leesburg, Loudoun Co.....1881
 " A. R. Mott, Sr.....Leesburg, Loudoun Co.....1879
 " John E. Mounts.....Mountsville, Loudoun Co.....1881
 Dr. Herbert M. Nash.....Norfolk, Norfolk Co.....1871
 " John H. Neff.....Harrisonburg, Rockingham Co.....1882
 " Hugh T. Nelson.....Charlottesville, Albemarle Co.....1875
 " Robert W. Nelson.....Charlottesville, Albemarle Co.....1872
 " ——— Nelson.....Danville, Pittsylvania Co.....1882
 " Napoleon B. Nevitt.....Acotink, Fairfax Co.....1873
 " Walter A. Newman.....Norfolk, Norfolk Co.....1876
 " Grier M. Nickell.....Millboro, Bath Co.....1881

Dr. Wm. P. Nicolson.....Atlanta, Ga.....1878
 " H. P. C. Noble.....Richmond, Henrico Co.....1882
 Dr. John W. Owen.....Stephen City, Frederick Co.....1878
 " W. Otway Owen.....Lynchburg, Campbell Co.....1871
 " Wm. O. Owen, Jr.....Lynchburg, Campbell Co.....1880
 Dr. John R. Page.....University of Virginia, Albemarle Co.....1875
 " R. P. Page.....Berryville, Clarke Co.....1882
 " T. L. Painter.....Knob, Tazewell Co.....1874
 " R. H. Parker.....Portsmouth, Norfolk Co.....1873
 " Wm. W. Parker.....Richmond, Henrico Co.....1870
 " James Parrish.....Portsmouth, Norfolk Co.....1871
 " Henry M. Patterson.....Monterey, Highland Co.....1875
 " Jesse H. Peek.....Hampton, Elizabeth City Co.....1880
 " James F. Pendleton.....Marion, Smythe Co.....1871
 " Charles H. Perrow.....Staunton, Augusta Co.....1870
 " C. E. Peyton.....Martins, Pulaski Co.....1881
 " D. C. Pharr.....Gap Mills, Monroe Co., W. Va.....1879
 " James E. Pharr.....Simmons ville, Craig Co.....1873
 " C. C. Phillips.....Staunton, Augusta Co.....1870
 " W. E. Pitman.....Lynchburg, Campbell Co.....1876
 " Thomas H. Pleasants.....Richmond, Henrico Co.....1878
 " Wm. B. Pleasants.....Richmond, Henrico Co.....1875
 " Geo. Wm. Pollard.....Aylett's, King & Queen Co.....1877
 " R. C. Powell.....Alexandria, Alexandria Co.....1872
 " R. S. Powell.....White Plains, Brunswick Co.....1877
 " Robert J. Preston.....Abingdon, Washington Co.....1871
 " T. J. Pretlow, Jr.....Jerusalem, Southampton Co.....1872
 " L. S. Pritchett.....Mt. Cross, Pittsylvania Co.....1880
 " Robert M. Pulliam.....Richmond, Henrico Co.....1870
 Dr. John Randolph.....Charlottesville, Albemarle Co.....1877
 " W. C. N. Randolph.....Charlottesville, Albemarle Co.....1875
 " Gavin C. Rawls.....Carrsville, Isle of Wight Co.....1877
 " Wm. P. Reese.....Taylors Store, Franklin Co.....1876
 " W. R. Rice.....Lisbon, Bedford Co.....1872
 " Thomas J. Kiddell.....Richmond, Henrico Co.....1870

ACTIVE FELLOWS—CONTINUED.

NAMES.	POSTOFFICES.	SESS. ELECTED.	NAMES.	POSTOFFICES.	SESS. ELECTED.
Dr. George E. Rives	Rives, Prince George co.....	1877	Dr. Edward A. Stabler.....	Alexandria, Alexandria co.....	1879
" C. V. Robinson.....	Petersburg, Dinwiddie co.....	1877	" Charles E. Stafford.....	Staffordsville, Giles co.....	1877
" E. T. Robinson.....	Richmond, Henrico co.....	1877	" David Steel	Petersburg, Dinwiddie co.....	1871
" Wm. L. Robinson.....	Danville, Pittsylvania co.....	1878	" H. C. Stevens.....	Marion, Smythe co.....	1872
" Wm. G. Rogers.....	Charlottesville, Albemarle co.....	1875	" Wm. S. Stoakley.....	Ray View, Northampton co.....	1873
" George Ross.....	Richmond, Henrico co.....	1872	" Hugh Stockdell.....	Petersburg, Dinwiddie co.....	1871
" E. W. Rowe.....	Orange C. H.....	1874	" Thomas D. Stokes.....	Danville, Pittsylvania co.....	1871
" M. A. Rust.....	Richmond, Henrico co.....	1882	" R. B. Stover.....	Richmond, Henrico co.....	1882
Dr. E. W. Sale	Stewartsville, Bedford co.....	1872	" W. J. Strother.....	Culpeper, Culpeper co.....	1882
" S. R. Sayres.....	Wytheville, Wythe co.....	1871	" Richard T. Styll	Richmond, Henrico co.....	1878
" G. W. Schlosser.....	Gordonsville, Orange co.....	1882	" W. T. Sutton.....	Norfolk, Norfolk co.....	1877
" James M. Scott.....	Raccoon Ford, Culpeper co.....	1880	" Joseph H. M. Sykes.....	Boykins, Southampton co.....	1882
" John W. Scott.....	Gordonsville, Orange co.....	1877	Dr. H. Cabell Tabb.....	Richmond, Henrico co.....	1870
" Wm. P. Sebrelle.....	Boykins, Southampton co.....	1882	" James F. Tate.....	Swoopes, Augusta co.....	1882
" Wm. Selden.....	Norfolk, Norfolk co.....	1871	" Robert H. Tatam.....	Mattoax, Amelia co.....	1873
" R. B. Shackelford.....	Cobham Depot, Albemarle co.....	1871	" Armstead G. Taylor.....	Chula, Amelia co.....	1873
" T. W. Shelton.....	Staunton, Augusta co.....	1871	" Hugh M. Taylor.....	Richmond, Henrico co.....	1877
" Charles Slaughter.....	Lynchburg, Campbell co.....	1880	" J. W. Taylor.....	Hillsboro, Loudoun co.....	1881
" Wm. H. Shepherd.....	Norfolk, Norfolk co.....	1873	" Phillip Taylor.....	Richmond, Henrico co.....	1882
" Charles M. Shields.....	Richmond, Henrico co.....	1880	" T. James Taylor.....	Walthall's Store, Brunswick co.....	1870
" John G. Skelton.....	Richmond, Henrico co.....	1870	" Wm. H. Taylor.....	Richmond, Henrico co.....	1870
" Jacob K. Simmons.....	Longwood, Rockbridge co.....	1877	" B. B. Temple.....	Danville, Pittsylvania co.....	1880
" John Philip Slaughter.....	The Plains, Fauquier co.....	1872	" George W. Thornhill.....	Lynchburg, Campbell co.....	1880
" R. M. Slaughter.....	Orange C. H.....	1880	" Joseph S. Tipton.....	Hillsville, Carroll co.....	1873
" T. T. Slaughter.....	Orange C. H.....	1880	" Christopher Tompkins.....	Richmond, Henrico co.....	1870
" Thomas W. Smith.....	Bethel Academy, Fauquier co.....	1877	" J. S. Tompkins.....	Botetourt Springs, Roanoke co.....	1876
" H. Somerville.....	Mitchells Station, Culpeper co.....	1882	" Wm. B. Towles.....	University of Virginia, Albemarle co.....	1872
" Walter Somerville.....	Mitchells Station, Culpeper co.....	1876	" John G. Trevelian.....	Richmond, Henrico co.....	1875
" Joseph Southall.....	Burkeville, Nottoway co.....	1877	" A. V. Triplett.....	Culpeper, Culpeper co.....	1882
" James T. Spencer.....	Farmville, Prince Edward co.....	1874	" Alex. Tunstall.....	Norfolk, Norfolk co.....	1871
" J. F. Spinner	Big Island, Bedford co.....	1872	" Robert B. Tunstall.....	Norfolk, Norfolk co.....	1871

Dr. W. D. Turner.....Fergusson's Wharf, Isle of Wight co.....1882

Dr. John N. Upshur.....Richmond, Henrico co.....1870

Dr. E. Granville Vaughan.....Lynchburg, Campbell co.....1874

" George T. Vaughan.....Lowesville, Amherst co.....1882

Dr. J. Alex. Waddell.....Stannnton, Augusta co.1872

" Geo. T. Walker.....Gish's Mill, Roanoke co.....1875

" M. M. Walker.....Winchester, Ky.....1870

" Z. G. Walker.....Brownsburg, Rockingham co.....1873

" E. B. Ward.....Chatham Hill, Smythe co.....1874

" John Ward.....Warrenton, Fauquier co.....1882

" Thomas B. Ward.....Norfolk, Norfolk co.....1871

" James E. Warner.....Leesburg, Loudoun co.....1881

" Francis B. Watkins.....Rochester, N. Y.....1870

" E. M. Watts.....Portsmouth, Norfolk co.....1873

" Wm. R. Weisiger.....Manchester, Chesterfield co.....1870

" J. S. Wellford.....Richmond, Henrico co.....1870

" C. P. Wertenbaker.....Hanover C. H.....1882

" Geo. W. West.....Washington, D. C.....1870

Dr. Nelson G. West.....Goresville, Loudoun co.....1881

" John R. Wheat.....Richmond, Henrico co.....1878

" Lewis Wheat.....Richmond, Henrico co.....1882

" Isaac White.....Shawsville, Montgomery co.....1874

" Isaiah H. White.....Richmond, Henrico co.....1870

" James L. White.....Farmville, Prince Edward co.....1873

" Joseph A. White.....Richmond, Henrico co.....1880

" Wm. White.....Abingdon, Washington co.....1873

" C. T. Whiting.....West Point, King William co.....1879

" Oscar Wily.....Salem, Roanoke co.....1873

" James Willard.....Lovettsville, Loudoun co.....1881

" Alexander F. Wills.....New Glasgow, Amherst co.....1871

" M. A. Wilson.....New River Depot, Pulaski co.....1873

" W. A. Wilson.....Christiansburg, Montgomery co.....1875

" John B. Wiley.....Gerardstown, Berkeley co., W. Va.....1873

" John F. Winn.....Richmond, Henrico co.....1877

" Edwin N. Wood.....Buchanon, Botetourt co.....1872

" Jud. B. Wood.....Richmond, Henrico co.....1878

" Landon A. Woodson.....Richmond, Henrico co.....1873

" R. H. Worthington.....Kempsville, Princess Anne co.....1873



